

# Bachelor of Hotel Management thesis

## DETERMINANTS OF INTENTION TO STAY AT THE GREEN HOTEL: EMPIRICAL EVIDENCE IN VIETNAM



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## EXECUTIVE SUMMARY

**About:** Along with the development momentum of eco-friendly consumption and the rising customers' environmental concerns, the green hotel market has many opportunities to bloom in the upcoming time. Although green hotels are still a relatively new trend in Vietnam in recent years, this tendency has contributed to promoting a green lifestyle and environmental protection awareness among the people.

**Purpose:** This study aims to identify and understand the factors influencing customers' intention to choose a green hotel when traveling in Vietnam. The study proposes some constructive solutions and directions for further research.

**Methodology:** Descriptive study design was used in this study. A standard questionnaire was used to collect the required data. The study used the non-probability snowball sampling method. The data was collected through 306 valid answers from the survey, which included consumers aged 18 and above with various occupations in Vietnam.

**Results:** The study shows that when considering factors affecting consumer intention to stay at a green hotel in Vietnam, the direct relationship between green hotel knowledge and Intention to stay at the green hotel is positive. Besides, the results are also supported when considering the intermediary role of Customer attitude and Green trust between the independent and dependent variables.

**Research Implications:** This study contributes more evidence on green hotel research, as well as suggestions for businesses to come up with appropriate marketing strategies.

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## LIST OF ABBREVIATIONS AND ACRONYMS

AVE	Average variance extracted
B2B	Business-to-business
B2C	Business-to-consumer
CA	Customer attitude
CB-SEM	Covariance-based Structural Equation Modeling
CR	Construct reliability
EC	Environmental concern
GHK	Green hotel knowledge
GT	Green trust
HTMT	Heterotrait-Monotrait Ratio
INTS	Intention to stay at the green hotel
PCE	Perceived customer effectiveness
PLS	Partial Least Square
PLS-SEM	Partial Least Square Structural Equation Modeling
SEM	Structural Equation Modeling
SPSS	Statistical Package for the Social Sciences
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
VIF	Variance Inflation Factor
$\beta$	Beta coefficient

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# CHAPTER 1: INTRODUCTION

## 1.1 Topic background

### 1.1.1 Vietnam's hospitality industry

Vietnam's tourism and hospitality industry has been steadily growing, with a rising number of international tourists visiting the country each year. The hospitality industry flourished due to the increasing demand, and hotels slowly shifted towards sustainable practices to reduce costs and increase customer satisfaction. The arrival of Covid-19 pandemic immensely impacted the hospitality industry in Vietnam. The industry has experienced a major decline in the number of customers, revenue, and employment rate due to the pandemic. Hotels have been hit particularly hard, with the lack of international tourists and travel restrictions leading to decreased business activities and revenue.

The hospitality industry in Vietnam has also faced disruption due to the implementation of safety and health guidelines. Many hotels have had to invest in additional staff, equipment and take stringent safety measures to comply with safety guidelines, leading to increased operational costs. In addition, the pandemic has forced many hotels to shift toward digital solutions and online marketing strategies to remain afloat (Hoang et al., 2021). Furthermore, the pandemic also caused changes in consumer behavior, with customers increasingly preferring sustainable solutions and contactless payment methods. The tourism and hospitality industry are slowly recovering as the pandemic improves in Vietnam. Hotels have to shift their focus from cost-cutting to customer satisfaction and safety, with many implementing green practices to reassure customers of their safety and security. Furthermore, the industry is adapting to the new normal by introducing contactless payment solutions and digital marketing strategies.

Vietnam's hotel industry is set to grow in the coming years, with the addition of 54,038 new hotel rooms by the end of 2022. According to Top Hotel News, 30 of these hotels, which altogether encompass 10,359 rooms, were opened in 2022, with 36 opening in 2023, 15 in 2024, and the remaining 49 in 2025 and beyond.<sup>1</sup> The most valuable locations for hotel growth are Ho Chi Minh City and Hanoi, with 13 hotels in each city slated to open. Marriott is involved in the projects, with the Ho Chi Minh City Grand Marina Marriott Hotel being the most prominent. This growth in the hotel industry comes from the increasing number of

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<sup>1</sup> <https://tophotel.news/country-overview-vietnam-to-enhance-hotel-scene-with-130-new-properties-infographic/> [Accessed: 20 March 2023].

foreign tourists visiting Vietnam. According to Asia Property Awards, a total of 602,000 foreign tourists visited the country in the first half of 2022, which is 6.8 times more than the number of arrivals compared to last year.<sup>2</sup> This rising number of tourists has resulted in hotels being completely booked earlier in the year, boosting hotel room rates.



Figure 1. 1: Quantity of hotel projects in Vietnam from 2022 to 2025<sup>3</sup>

According to a market research report on the hotel market in Vietnam implemented by Research and Markets, the total revenue generated in the hotel segment is projected to reach US\$1.49 billion in 2023.<sup>4</sup> The report further states that the revenue is expected to show an annual growth rate of 7.32%. It is estimated that online sales will be the largest source of revenue in the hotels segment, accounting for 61% of total revenue by 2027.

Undeniably, the hotel industry has been contributing a lot to the national budget, and creating job opportunities for many people simultaneously. Therefore, promoting the development of Vietnam's hospitality market is very important and will boost the country's economy.

<sup>2</sup> <https://www.asiapropertyawards.com/en/vietnam-aims-for-5-million-international-arrivals-in-2022-domestic-arrivals-exceed-60-million-target/> [Accessed: 18 March 2023].

<sup>3</sup> <https://tophotel.news/country-overview-vietnam-to-enhance-hotel-scene-with-130-new-properties-infographic/> [Accessed: 20 March 2023].

<sup>4</sup> <https://www.researchandmarkets.com/reports/5534237/hotel-market-in-vietnam-2022-2026> [Accessed: 21 March 2023]

### 1.1.2 Green hotel development trend in Vietnam

In recent years, Vietnam's tourism has been on strong development momentum, and the number of international tourists and domestic tourists is increasing. Vietnam's tourism industry is growing and becoming more well-known on a global scale, and many local areas are being chosen as the top travel destinations by visitors from nations around the globe at the same time. According to Vietnam National Administration of Tourism, there were 18 million international visitors in 2019.

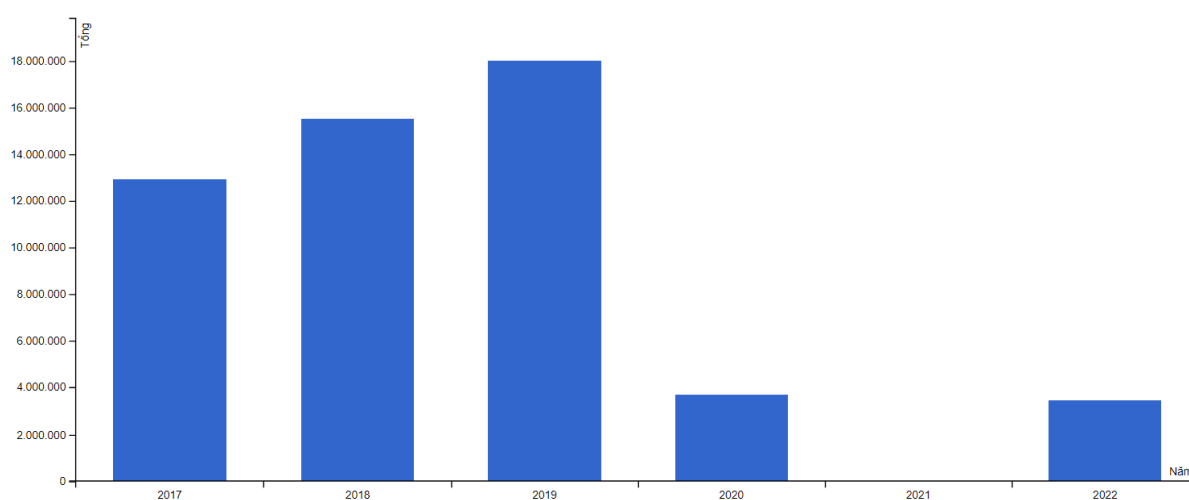


Figure 1. 2: Number of international tourists in Vietnam from 2017 to 2022 (in millions)<sup>5</sup>

The international tourists flow, along with the increasing environmental concerns such as air pollution, climate change, and resource depletion have been raising the popularity of the trend of eco-friendly consumption, especially in choosing hotels. The hotel operation is said to be less eco-friendly due to the use of disposable amenities and products, hot pools, and a large number of daily laundry operations. With the escalating awareness of tourists about the environmental impacts of hotels, there is an increasing need for tourists to choose green hotels.

The term of “Green hotel” has appeared in Vietnam since the early 2000s with the appearance of the Sheraton Hanoi Hotel. The Sheraton Hanoi Hotel is a five-star hotel in the heart of Hanoi. It has been a leader in the hospitality industry since its opening in 2004 and is renowned for its commitment to providing quality services and sustainable practices. The hotel was granted an ISO 14001:2004 certification for environmental management system by TUV Rheinland - an independent safety inspection association in 2010 and certified as a green hotel by the Vietnam National Administration of Tourism, making it the first hotel in

<sup>5</sup> <https://vietnamtourism.gov.vn/statistic/international> [Accessed: 23 March 2023].

the country to receive this distinction.<sup>6</sup> This certification has enabled the hotel to become a “green” destination, focusing on energy conservation and environmental protection.

In response to the current trend, hotels in Vietnam are increasingly meeting the criteria for green hotel, defined by a standard for promoting environmentally friendly and energy conservation practices. According to Asian green hotel standard, the criteria for a green hotel including but not limited to the following measures: reducing water and energy consumption, proper waste management, and using renewable energy sources.<sup>7</sup> These initiatives are for the sake of being responsible for the environment and supporting the local community.

## **1.2 Problem statements**

The hospitality industry, particularly the hotel industry, is inextricably tied to the environment. In reality, there are several threats of harming the environment during operation. Therefore, most countries in the world, especially developed countries, pay special attention to environmental protection, notably the tourism environment, ensuring safety and health for the community to develop sustainably and Vietnam is no exception.<sup>8</sup> With a very fast development to meet the needs of a large number of tourists, Vietnam also faces many challenges and difficulties.

According to Nguyen (2021), Vietnam is among the world's least sustainable travel destinations. The author stated that Vietnam ranked 96th out of 99 countries in a worldwide sustainable tourism rating, which analyzed several aspects including lodging. One of the main factors leading to the situation is that the green hotel model is yet to be propagated in Vietnam. As building and operating green accommodations can be more expensive than traditional hotels, this can make it difficult for hotel owners and investors to justify the additional costs, especially if they do not believe that guests are willing to pay more for green accommodation model (Appasaheb, 2020). Additionally, there are regulatory hurdles that prevent the development of green hotels, which include issues related to obtaining permits and licenses for construction or difficulties in sourcing sustainable materials and products. Thus, there are few chances that a consumer can pass by and choose to dwell at a green hotel.

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<sup>6</sup> <https://baobinhduong.vn/en/sheraton-first-green-hotel-in-vietnam-a79776.html> [Accessed: 23 March 2023]

<sup>7</sup> <https://www.asean.org/wp-content/uploads/2012/05/ASEAN-Green-Hotel-Standard.pdf> [Accessed: 3 March 2023].

<sup>8</sup> [https://www.international.gc.ca/world-monde/issues\\_developpement-enjeux\\_developpement/environnemental\\_protection-protection\\_environnement/sustainability-viabilite.aspx?lang=eng](https://www.international.gc.ca/world-monde/issues_developpement-enjeux_developpement/environnemental_protection-protection_environnement/sustainability-viabilite.aspx?lang=eng) [Accessed: 20 March 2023]

Besides, a problem exists regarding the accurate knowledge of green hotels for consumers. Green hotels have become popular recently due to their focus on sustainability and environmental consciousness (Bui, 2020). However, there is still a lack of awareness among the general public about the importance of sustainability, as many people prioritize convenience and comfort over sustainability when choosing their accommodations. Furthermore, due to limited education and outreach about sustainability, language barriers, or insufficient marketing efforts to promote eco-friendly accommodations, consumers do not have the necessary knowledge or information to make informed decisions about green hotels, which can prevent them from choosing sustainable options.

Lastly, there is the fact that Vietnam has not yet established standards for approving green hotels, a common action in many other countries that already have established practices and policies. The lack of standards to assess green hotels in Vietnam is a major obstacle to the growth of the green hospitality sector in the country. There is neither a unified system to evaluate the sustainable practices of hotels and resorts, nor any regulations that set benchmarks for green hotels. This means that hotels cannot compare themselves to others and strive to reach higher standards. Furthermore, the shortfall of standards for approving green hotels in Vietnam makes it difficult for consumers to distinguish between truly green hotels and those that are simply claiming to be “green” without any clear criteria or oversight. This shortage of clarity makes it challenging for consumers who want to make responsible travel choices to identify and support hotels that are truly committed to sustainability, which can lead to frustration and skepticism among travelers. Additionally, without clear standards for green certification, consumers may find it difficult to evaluate hotels’ environmental performance, as there are no universally accepted metrics or benchmarks for assessing sustainability in the hospitality industry.

In general, in the Vietnamese market, there are abounding studies related to the intention to stay at luxury hotels (Goeltom et al., 2020; Mai and Tran, 2014; Mai and Nguyen, 2018) yet relatively little is known about the determinants of intention to stay at the green hotel. This situation may lead to the fallback of Vietnam in the worldwide trend of green consumption; therefore, further research on the topic is needed in Vietnam. From that point, we expect to conduct this study to deeply analyze what elements of green hotels will impact their intention to choose a place to stay. This study is expected to provide several recommendations for enterprises doing hospitality business promotion and marketing businesses in this field, have a more focused view of the important sensations about customers, and can make better

reception for guests about the sustainable travel market simultaneously. Hopefully, through this research, hotel brands can have more effective public relations plans to create an inducement for them to choose a green hotel.

### **1.3 Research objective**

This research aims to identify the factors influencing customers' intention to choose a green hotel when traveling in Vietnam. This study was achieved by carrying out the main objective: **“Determining factors predicting customer intention to stay at the green hotel in Vietnam”**

### **1.4 Research question**

In alignment with our investigation’s primary goal, we present this study’s central inquiry: **“What are the factors determining customers' intention to stay at the green hotel?”**

### **1.5 Research scope**

The purpose of the survey is to find out the factors that directly affect the intention of customers to stay at the green hotels in Vietnam. The scope of the research is extended across the country and focuses on customers who are interested in experiencing hotel accommodation services to synthesize people's opinions to assess the factors affecting the intention to stay at the green hotel. Each survey participant will be asked to complete a short questionnaire to assess impacts that influences their hotel choice while touring in Vietnam.

Target sample characteristics:

- Type of survey: Online survey
- Age: 18 years old and above
- Gender: All genders
- Research scope: Vietnamese and foreigners long-term living in Vietnam
- Occupation: All professions



## **1.6 Methodology and data overview**

In this study, primary research including quantitative methods was used to collect through a survey which was subsequently analyzed using SmartPLS. SmartPLS is a program used to verify measurement models and structural model analysis. Following that, we review the analytic results to identify which elements are vital, which factors must be improved, and which must be kept. Secondary research is conducted by reading research publications, newspapers, websites, and analyzing internal data.

## **1.7 Thesis outline**

- Chapter 1: Introduction

The first chapter provided all information about the background of the topic with all the particulars needed for the research including research objectives, research questions, scope, and methodology.

- Chapter 2: Overview

This second chapter presented relevant theories as a basis for developing research questions.

- Chapter 3: Methodology

This third chapter explained the research methodology: quantitative analysis, data collection, and data analysis methods. Then it was explained why the study had to do it.

- Chapter 4: Analysis and Findings

This chapter analyzed data from the theories of Chapter 3 and discussion of the data collected. Thereby presenting an in-depth analysis of the findings from these methods used in the study.

- Chapter 5: Recommendations and Conclusions

Based on the analysis of Chapter 4, this chapter will provide recommendations on the factors determining customer intention to stay at a green hotel.

# **CHAPTER 2: LITERATURE REVIEW AND PROPOSED MODEL**

## **2.1 Theoretical framework**

### **2.1.1 Service marketing**

#### **2.1.1.1 Definition**

According to Johnston et al. (2012), service is an intangible activity or benefit one party provides to another in exchange for money. Services are an important part of the economy, accounting for approximately four-fifths of most developed countries Gross Domestic Product. Services come in many shapes and forms provided by various types of organizations, including business-to-consumer (B2C), business-to-business (B2B), internal, public, and non-profit and voluntary services. On the other hand, Johnston et al (2012) stated that a service is an activity - a process or set of steps that involves the treatment of a customer or something belonging to them, where the customer is also involved and performs some role in the service process (co-production).

The service also brings to the customers many outcomes such as products, benefits, emotions, judgments, and intentions. From the operator's perspective, the service provided is the service process and its outputs designed, created, and enacted by the operation. On the other hand, the operations or the organizations provide a combination of products and services; they see "service" as a means of differentiating themselves from the competition. From the customer's point of view, the service received is their experience of the service, including their interaction with it, their perceptions of it, and their response to the service.

Nowadays, because of the development of the service industry, service marketing is an ongoing development area. We may claim that, in the last ten years, service marketing has reached parity with other areas of marketing. In addition, in the late 1970s, service marketing evolved as a separate sector of the marketing discipline (Brown et al., 1994).

The communication, management, and delivery of any act, performance, or endeavor with little to no tangible benefits for the consumer are referred to as service marketing. Service marketing has two key concepts of the customer as co-producer, value-in-use that help to explain this universal applicability, and the profound difference between the mainstream, goods-dominant logic, and the new approach based on service marketing. The service marketing literature views the customer as a co-producer of the service - as participating in a

production process wherein the value is generated only once the customer uses the service or goods (Lovelock et al., 2015).

Service marketing aims at the customer receiving experience, emotion, memory, or another intangible outcome as the primary benefit of the service encounter. The creation of a favorable image is necessary for the efficient marketing of a service, much like it is for product marketing. It may even be argued that because services are intangible, developing a strong brand image is more important for service marketing than product marketing. In the customers' perceptions, the service organization is also influenced by other elements, including advertising and other communication efforts such as the website, telephone calls, letters from service personnel, billings from the accounting department, and word-of-mouth comments from current, or former customers. These all add to what we refer to as the service marketing and service delivery systems.

Service quality, from a general point of view, involves comparing excellence in overall services over the long run (Parasuraman et al., 1988; Taylor & Baker, 1994). In service marketing, service quality is a crucial determinant of success in business for a hotel, and the most important and popular model for evaluating service marketing is the service quality model (SERVQUAL model) of Parasuraman. More than 20 years after their first SERVQUAL article appeared, Parasuraman et al. (1988) study still remain as one of the most influential works in service marketing. It is a method for determining and measuring the quality of the provided customer service. This scale of the SERVQUAL model is evaluated as having high reliability and accuracy in many days.

According to Parasuraman's research (1985), service quality is more difficult to evaluate when purchasing goods; the customers have many tangible cues to evaluate the quality, such as style, color, and personal feeling. However, we can offer suggestions on how to sway customer evaluations in the desired direction when a service provider is aware of how the consumer will assess the service. (Grönroos, 1982). Hence, Parasuraman obtained the most important executive response: "A set of key discrepancies or gaps exists regarding executive perceptions of service quality delivery to customers. When striving to provide a service that customers would consider to be of high quality, these gaps can be quite difficult to overcome."

Through an investigation, Parasuraman gained the SERVQUAL model with five gaps and the ten most important variables in service quality. Firstly, Parasuraman et al. (1985) identify ten factors such as:

- Reliability - performing consistently and correctly the first time.
- Responsiveness - the willingness of employees to serve the customers.
- Competence - the required knowledge and skills necessary to perform the task.
- Access - approachability and eye contact.
- Courtesy - respect, politeness, and friendliness of contact personnel.
- Communication - providing information to customers in a language they can understand.
- Credibility - honesty and maintaining the customers' best interests at heart.
- Security - freedom from uncertainty, danger, or risks.
- Understanding the customer - attempting to understand the needs of the customers.
- Tangibles - the outward signs of service, including the staff members' looks.

Secondly, about the gaps which are the most on the service marketer's side.

- The first gap is the “Consumer expectation - management perception gap” - shows the marketer what consumers expect in a quality service that is appropriate to the consumer expectations.
- The second gap is the “Management perception - service quality specification gap” - the idea of an organization about what the customer expects from their service.
- The third gap is the “Service quality specification - service delivery gap” - exists for performing services well and treating consumers correctly, but high-quality service performance may not be a certainty.
- The fourth gap is the “Service delivery - external communications gap” - media advertising and other communications by a firm can affect consumer expectations in good and bad ways.
- The fifth gap is the “Expected service - perceived service gap” - the difference between the service a customer expects and the service they experience.

The service quality consumers perceive on the size and direction of gap five, which is associated with the design, marketing, and delivery of services. This is the most important gap that makes customers satisfaction with the service, and this gap will have an impact on the

other previous gap. Therefore, providers must work to close this gap in order to reduce the fifth gap and improve service quality. Being passionate about developing relationships with customers and understanding their needs to the point where you can provide value in return for the high-quality services that companies offer is necessary for that position.

#### **2.1.1.2 Classification of service**

Depending on the type of service provided, different portions of the entire service operation are visible to customers. According to Lovelock et al. (2015), high-contact services directly involve the physical person of the customer. They require customers to enter the service factory to receive a high-contact service; a consumer is usually expected to go to the service provider's space, such as a hotel, restaurant, school, or airport. On the contrary, low-contact services minimize customer contact with the service provider, resulting in the vast bulk of the service operations system operating backstage; frontstage elements are normally limited to contact by mail and telecommunications (Lovelock et al., 2015). In this report, we will deeply research the high-contact services, which are the hospitality service and especially the green hotel service.

#### **2.1.2 Hotel management**

As mentioned above, the hospitality industry is considered a high-contact industry; because of this feature, hotel management needs to be strictly controlled so that every time customers stay they will feel satisfied. Amber et al. (2023) indicated that hotel management is a branch of the hospitality industry that oversees hotel operations such as finance, human resource management, public relations, and marketing management. Furthermore, hotel management must entail successfully overseeing every aspect of the hotel to ensure consistent growth and development of business.<sup>9</sup> Not stopping there, this field of the business engages customers to have a pleasant and comfortable stay and creates a friendly and welcoming ambiance for both customers and colleagues.

Based on Pham (2022), the hotel industry faces new challenges, such as service personalization - not just a service for all customers but a service designed specifically for each individual. Hence, the hotel industry needs more qualified human resources to meet this

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<sup>9</sup> <https://www.siteminder.com/r/hotel-management-definitions-operations-ideas-software/> [Accessed 04: April 2023]

customers' needs. In fact, the properly trained hotel industry only meets 37.5% of the market's demand; the rest comes from other specialized.<sup>10</sup> As can be seen, businesses will spend more time and money to train these industry employees. Moreover, after the Covid-19, the human resource of the hospitality industry was seriously reduced while the number of domestic and foreign tourists began to increase again.<sup>11</sup> Thus, hotel management is becoming recognized as a strong choice of study in Vietnam.

### 2.1.2.1 Classification of hotels

According to Cser and Ohuchi (2008), hotels are classified in different ways, which confuses customers and even hotel managers. Hotel classification systems are frequently used in the hospitality industry disseminate information about hotel amenities and services (Sufi and Shojaie, 2018). Kasavana (2017) mentioned that hotels are classified into four types based on their size or number of rooms, target markets, service levels, ownership, and affiliation. These types are briefly described below in detail:

- ***The number of rooms:*** The larger the hotel's size, the more employees it has. Thus, in large hotels, employees have had even more specialized tasks.
  - Under 150 rooms
  - 150 to 299 rooms
  - 300 to 600 rooms
  - More than 600 rooms
  
- ***Levels of service:***
  - Limited/economy service
  - Mid-range service
  - Upscale service
  - World-class service

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<sup>10</sup> <https://www.hospitality.com.vn/trien-vong/nhu-cau-nhan-luc-nganh-quan-tri-khach-san?fbclid=IwAR3hscsc0OBHDe98IjVUrKBPrKbKP8tc0Bon2jPwVpBifU31zibNJkRtm-0> [Accessed 04: April 2023]

<sup>11</sup> <https://baochinhphu.vn/ky-vong-nganh-du-lich-som-phuc-hoi-sau-dai-dich-covid-19.10222121115464637.htm> [Accessed: 17 March 2023].

- ***Target markets:*** The hotel targets various markets and can be classified based on the markets to which it attempts to attract guests.
  - Commercial hotels
  - Airport hotels
  - Casinos
  - Residential hotels
  - Life-style hotels
  - All-suites hotels
  - Vacation ownership and condominium hotels
  - Extended-stay hotels
  - Bed and Breakfast
  - Resort hotels
  - Business hotels
  - Conference centres
  - Convention hotels
  
- ***Ownership, and affiliation:***
  - Independent hotels
  - Management contract
  - Franchise/ referral group
  - Chain hotels

To sum up, building a green hotel will be significantly more expensive than building a regular hotel due to the expense of construction ideas and investment in facilities including the underground process of solid waste treatment, low-flow faucets, and blankets made of organic fabrics (Bui, 2020). Owing to the high construction cost of a green hotel, it is necessary to improve the level of service to sell the room at a high price deemed worthy by the customer. As a result, the service level of the green hotel is from upscale service or higher. Green hotels have the potential to attract not only customers seeking high-priced accommodations but also those tourists who adhere to traditional family vacationing habits, vacation property owners, and condominium hotel guests.

### 2.1.2.2 Classification of customers

Categorizing hotels will help customers better understand the type of service they will use, as well as customer classification will help hotels create service types for their target customers. It is easy to demonstrate that continuous economic development leads to the continuous change of enterprise marketing concept, which has been transformed from product-centric to customer-centric (Shen and Chen, 2013). In addition, the nature of competition in the market is oriented toward customer value.

The classification of customers enables company managers to comprehend the needs and behaviors of their client, thereby empowering them to provide superior services that satisfy their customers (Anand et al., 2013). Furthermore, attracting new customers is not enough to be successful in the market; managers must focus on retaining existing customers by establishing effective customer satisfaction and loyalty policies (Dominici and Guzzo, 2010). Customer segmentation is the process of dividing customer details into distinct and internally homogeneous groups in order to develop different marketing strategies tailored to their characteristics (Ramaraju and Savarimuthu, 2011). Therefore, exclusive sets of target customers in the business model (Stott et al., 2016). Our article will be aimed at businesses whose target customers are individual customers, which means B2C. Furthermore, any business that relies on B2C sales must maintain positive relationships with its customers in order to ensure their return (Kenton, 2022).

On the other hand, Fiol (2023) suggested hotel customers should be divided into the following groups:

- **Families:** Family is a classic element in the hotel industry and this type of customer is interested in leisure and catering services. In addition, based on characteristics, families include from oldest members to children who take vacations to relax, so they want to come to a hotel with appropriate facilities for all members.
- **Tourists:** Tourists are interested in comfort and convenience because they want to experience it, so additional services (such as city tours, and motorbike rent) play an important role in increasing the enjoyment of their stay.
- **Travelers:** This type of customer is interested in leisure, tours, and the most active experiences such as local culture. For instance, they want to discover the lesser-known and most unique locations, know how to get around independently, and be curious about local festivals, especially Generation Z is more important to experience than price and to learn everything from the Internet.



- **Special:** They are looking for a type of hotel that is more specialized or adapted to specific needs such as elderly customers or have a disability.
- **Business:** Business travelers, who account for 20% of global travelers become the most important market for city hotels; they especially have a very specific need in terms of convenient commodities to work such as having access to all the technology required, and high demand for features serving meeting incentive conference event.
- **Luxury:** Type of customer that is interested in exclusive, unique experiences, and excellent, limited service. Obvious realizes that high-class clients do not hesitate to spend huge sums of money to purchase privileges not offered to the general public.
- **Eco-friendly:** Consumers in this category are increasingly looking for sustainable experiences, considering the impact of their actions and the services they use, thereby aiming to reduce the consumption of natural resources.

### 2.1.3 Green hotel

#### 2.1.3.1 Definition

The hotel industry contributes to environmental damage (Demir et al., 2021). To emphasize the mention above, Singh et al. (2014) discovered that the hotel industry contributes the lion's share of organic or wet waste to landfills, which is the primary source of emissions. As a result, a growing number of hotels are joining the green movement to reduce harmful effects on the environment (Pizam, 2009). Fukey and Issac (2014) described that because customers like to stay in green hotels, it has become a hot topic in the hospitality industry. Hoang (2021) conducted an independent survey on Booking.com with over 29,000 participants from 30 countries, including 1,005 individuals from Vietnam. The survey revealed that 97% of Vietnamese travelers expressed a desire to travel sustainably following the Covid-19 pandemic. Additionally, over half of the participants (55%) reported feeling unsatisfied with current accommodations, which failed to meet their expectations. To sum up, green hotels are fighting to become the trend of consumers' choice of destination shortly.

A green hotel is known for being environmentally friendly, developed, and managed which intends to implement water and energy-saving programs and reduce solid waste.<sup>12</sup> Besides, based on Kasavana (2017), a green hotel is a hotel that prioritizes minimizing bad impacts on the environment such as reducing greenhouse gas emissions, recycling, saving water and

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<sup>12</sup> <https://www.hospitality-school.com/hotel-classification-type/> [Accessed 04: April 2023]

energy, and supporting organic gardening. Additionally, green hotels are pro-environmental accommodations that have applied sustainability principles and ecological practices to their operations to protect the environment.<sup>13</sup> Trang et al. (2018) confirmed the same viewpoint that hotels voluntarily provide green attributes often referred to as green hotels or environmentally friendly hotels. Moreover, Hoang et al. (2020) indicated that implementing green initiatives in the hotel industry can result in various advantages such as reducing operational expenses, enhancing employee involvement, boosting customer loyalty, and gaining a competitive edge. For instance, Las Vegas Sands Group has paid attention to minimizing environmental impact by launching a global sustainable development program named Sands ECO360 in 2010 and immediately received the LEED Gold® award, which helped their hotel improve its reputation and attract more customers.<sup>14</sup>

Nowadays, more and more terms are used to describe the new type of hotel, particularly those emphasizing environmental responsibility. Hence, the difference between eco-friendly and green hotels might easily mislead travelers. The trivago business blog showed that both kinds of hotels are trying to reduce their negative impact on the environment as much as possible by reducing carbon emissions and waste reduction.<sup>15</sup> Both these kinds of hotels do the smallest things interior design, such as using natural paints and dyes and using organic cotton or water-saving fiber bed linen (hemp, bamboo). Besides, the eco-friendly hotel has a stricter commitment to integrating with the natural environment, it is usually built on the seaside, perched on top of a mountain, or curled up on the sand of an island, so it features life in symbiosis with its environment (Mylène, 2022). Distinguished the eco-friendly hotel, green hotels are often built in cities, villages, or remote locations and become an attractive location choice for investors and customers (López-Bernabé et al., 2021). It is worth mentioning that green hotels are becoming increasingly popular when participating in certification programs or by maintaining green hotel associations.

### **2.1.3.2 Green hotel attribute**

According to Mensah (2004), the majority of hotel guests (90%) expressed a preference for hotels that demonstrate concern for the environment. A hotel must meet the following attributes criteria to be green: solid waste management, energy efficiency, water efficiency

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<sup>13</sup> <https://greenhotels.com/index.php> [Accessed: 5 April 2023]

<sup>14</sup> <https://www.greenbiz.com/article/las-vegas-sands-raises-stakes-green-development> [Accessed 4 April 2023]

<sup>15</sup> <https://businessblog.trivago.com/sustainable-hospitality-trends-eco-friendly-hotel-tips/> [Accessed 4 April 2023].

and water quality, air quality management, noise pollution control, wastewater treatment and management, toxic and chemical substance disposal management.<sup>16</sup> Hence, green hotel attributes include things that are visible to guests in the lobby, in the guest room, and things that are hard to see such as underground treatment systems and in the back office. Through the qualitative study, Han and Chan (2013) found that saving energy and using environmentally friendly materials are the top two attributes of green hotels. In addition, Millar and Baloglu (2008) mentioned that customers choose green hotels as holiday destinations due to their features such as sheets change upon request, recycling bins, occupancy sensors, and turning off lights in unoccupied guest rooms were all very well received. In addition, it can be said that these visible attributes play an essential role since customers can easily see them and build their trust in the green hotel as much as possible. Besides the visible ones that can make a good first impression in the customer's mind, there are invisible attributes which still very important in green hotels such as solid waste treatment process, and saving electricity (Balaji et al., 2019). To conclude, green hotel attribute includes tangible and intangible attributes that investors cannot ignore.

## **2.1.4 Green hotel behavior**

### **2.1.4.1 Theory of Reasoned Action and Theory of Planned Behavior**

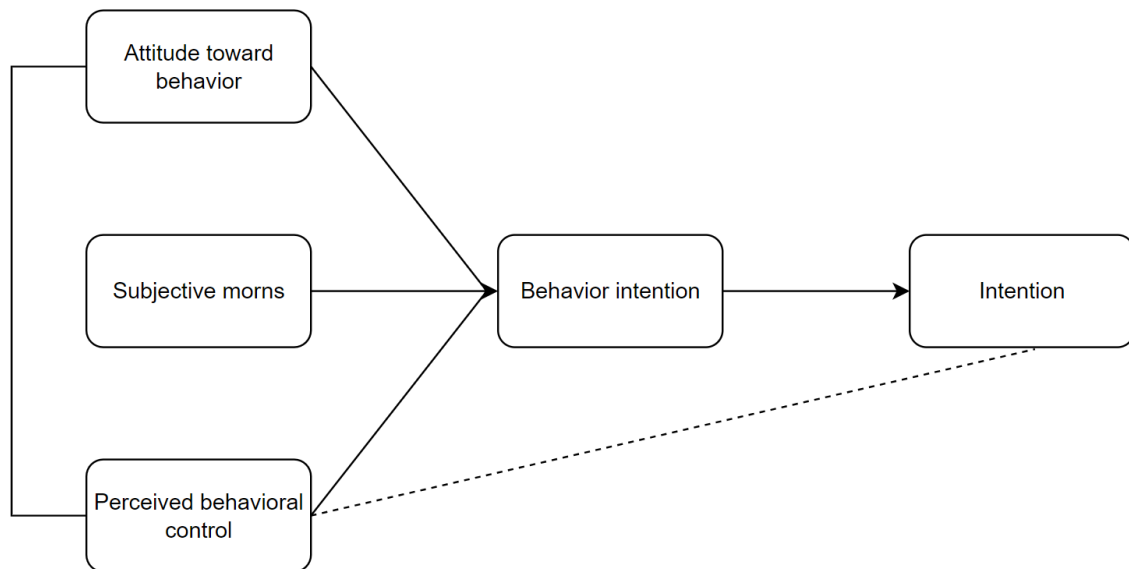
The Theory of Reasoned Action (TRA) proposes that an individual's behavior is influenced by their intention to operating that behavior, which is determined by their attitude towards the behavior and the subjective norms they perceive (Fishbein et al., 1975). TRA suggests that if a person evaluates the behavior positively and believes that others expect them to perform it, their motivation to do so will increase, resulting in a higher intention to perform the behavior and a greater likelihood of doing so. Sheppard et al. (1998) confirmed that a strong correlation between attitudes, subjective norms, behavioral intentions, and actual behavior. However, some studies have also indicated a potential limitation of this theory, as behavioral intention does not always translate into actual behavior (Mimiaga et al., 2009).

The theory of planned behavior (TPB) developed by Ajzen (1985) based on the theory of reasoned action (Fishbein et al., 1975) provides a framework for understanding complex human behavior (Ajzen, 1991). Moreover, Ajzen's TPB has been successfully applied in the

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<sup>16</sup> <https://www.asean.org/wp-content/uploads/2012/05/ASEAN-Green-Hotel-Standard.pdf> [Accessed: 3 March 2023].

analysis of intention to use green hotels (Han et al., 2010; Han and Kim, 2010). According to TPB, if a person feels a positive attitude toward a behavior, then that person's intention is also positive (Ajzen, 1991). Besides, the concept of TPB is not only used to predict customer intent but also to generate customer intent, which will influence their behavior (Ajzen, 2002).



*Figure 2. 1: The theoretical framework of the theory of planned behavior (Ajzen, 1991)*

Based on the TPB framework, behavior intention is a central component. Behavior intention is the direct premise of consumer behavior, besides, behavior intention is also understood as a sign to consider the possibility of performing a particular behavior. Although the relationship between intention and actual behavior is not completely accurate, Ajzen (1985, 1991), and Lam and Hsu (2016) asserted that intention could be the best predictor of behavior. In addition, Ajzen (1991) also showed that the stronger an individual's intention to perform a certain behavior, the more likely that individual is to perform that behavior. The aim of this theory is to examine the attitudes towards behavior, subjective norms, and perceived behavioral control.

According to Ajzen et al. (2009), the first predictor of intention is attitude toward the behavior, which is defined as an individual's overall assessment of a particular behavior. Furthermore, the theory shows that attitudes are formed through two closely related factors: beliefs and evaluations of the outcomes associated with engaging in a particular behavior. (Ajzen, 1991; Ajzen and Fishbein, 1980).

The second predictor of intention in the TPB mentioned is the subjective norm. Subjective norm refers to an individual's estimate of the social pressures that compel consumers to

engage in or not engage in a target behavior. In addition, subjective norms are built on personal beliefs about how others perceive them and their motivation to conform to the opinions of others (Ajzen, 1991).

The last predictor of intention in the TPB is perceived behavioral control which refers to an individual's perception of the ease or difficulty of conducting the behavior (Ajzen, 1991; Huchting et al., 2008). This factor consists of two aspects: control beliefs that show an individual's assessment of the presence or absence of those who support and discourage the behavior. The second aspect mentioned is perceived power, understood as his/her assessment of the impact of these factors in facilitating or hindering a particular behavior (Ajzen, 1991; Huchting et al., 2008; Lam and Hsu, 2006). In conclusion, it can be said that the application of these non-voluntary factors to the current theory has significantly improved the ability of people to predict behavior in different contexts (Han et al., 2010).

#### **2.1.4.2 Customer behavior**

Consumer behavior is the study of how customers (individuals or organizations) decide to buy a product, select and buy as well as use it to satisfy their needs, and eventually dispose of it, and how this behavior affects society (Perner, 2016). To be more precise, customer behavior concerns why consumers make a decision to buy a product or a service. This includes what consumers want, how much they are willing to pay and what factors they choose that product. In the hospitality industry, customer behavior influences the service selection process; from there, businesses will ask the question "Why do customers choose my hotel?". Furthermore, it is undeniable that in recent years, the hospitality industry is one of the largest and fastest-growing industries in the world.<sup>17</sup> As a result, capturing customer behavior in this field is an essential part of running a successful business. At the same time, understanding what customers are looking for will help hospitality business owners better cater to the needs of their guests.

#### **2.1.4.3 Intention to stay at the green hotel**

The intention to stay (INTS) relate to consumer behavior that pertains to the intention to purchase. Generally, purchase intention is associated with consumer behavior, perceptions,

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<sup>17</sup> <https://www.mdis.edu.sg/blog/top-10-fastest-growing-industries-in-2022/> [Accessed: 20 March 2023].

and attitudes. Purchasing behavior is important for consumers when considering and evaluating certain products or services (Keller, 2001). Ajzen and Fishbein (1980) stated that customers' behaviors can be predicted based on intentions. Because a person is more likely to engage in a particular activity if they have a strong intention, behavioral intentions are considered important elements in understanding how consumers behave (Ajzen, 1991).

In the green hotel context, Han and Kim (2010) and Han et al. (2010) used the TPB model to explain consumers' decision-making when visiting green hotels. The results show that the TPB model can predict consumers' intention to stay at the green hotels. Going to green hotels is a choice that combines social duty with personal morality.

Moreover, many individuals realize that their purchasing behaviors can influence the environment directly (Lee et al., 2010). Therefore, the intention to visit a green hotel can be regarded as derived from environmental concerns. According to Laroche et al. (2001), these consumers will likely purchase environmentally friendly hotel products and services over other hotels. In line with this trend, there has been an upsurge in customer demand for green hotels; therefore, it is crucial to comprehend how a green hotel customer makes decisions to create marketing campaigns that encourage good decisions (Han et al., 2010).

## 2.2 Related models

### 2.2.1 The model of Wang et al. (2018)

In the research paper of Wang et al. (2018), the study's purpose was to examine consumers' staying intention to visit green hotels in China through the TPB model. Their study extended the TPB model by incorporating additional use-related factors such as perceived customer effectiveness and environmental concern.

The author conducted data collection by carrying out a self-administered questionnaire survey analyzed with the assistance of structural equation modeling. Data surveys were collected from Chinese tourists across 10 major cities. The survey result demonstrated that 95% of respondents are over 20 years old and have an awareness of environmental issues and green hotels. During 2 months conducting the survey, there were 547 participants and by filtering the answer sheets, the authors obtained 324 valid answers. Thereby, Wang et al. (2018) conducted data analysis, using the chi-square test and t-test.

The results indicated that the relationships between perceived customer effectiveness, environmental concern, and attitude are all positive and statistically significant. Customers' attitude toward visiting green hotels is affected by their perceived customer effectiveness and environmental concern. Contrary to research hypotheses, the impacts of environmental concern on the attitude and the intention to visit green hotels are supported.

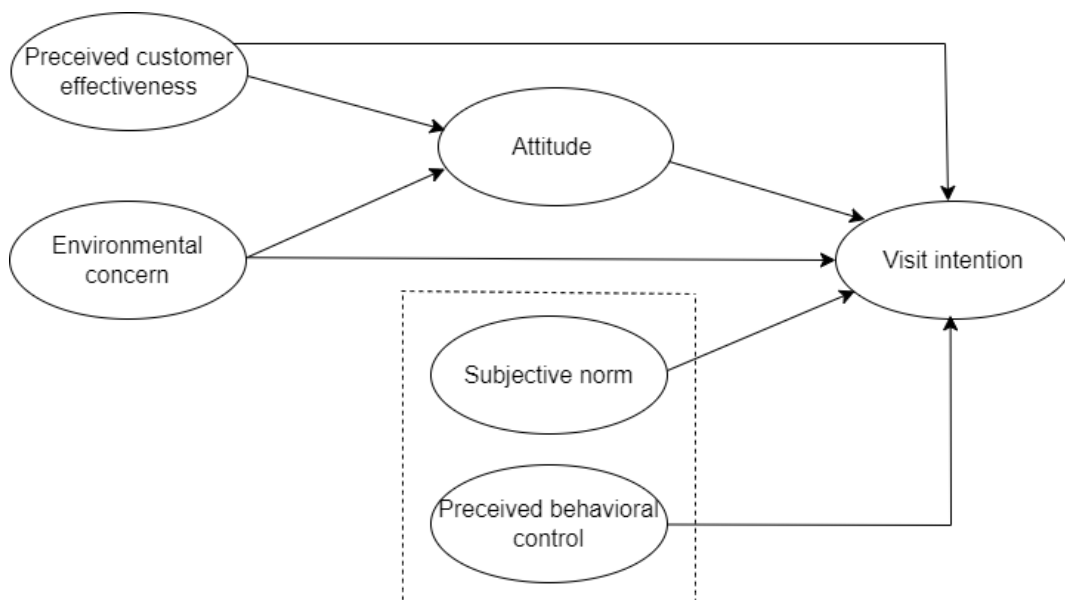


Figure 2. 2: Conceptual model (Wang et al., 2018)

### 2.2.2 The model of Balaji et al. (2019)

The research of Balaji et al. (2019), this study used the partial least squares method by making a two-stage to examine how green hotel qualities may be perceived by potential guests and the underlying mechanisms through which this perception affects attitudes toward green hotels, intentions to stay there, and willingness to pay.

Specifically, this study examines how and when hotels' environmental practices translate into positive guest responses (attitude, intention to stay, and willingness to pay) by testing the mediating and moderating effects. The research was studied in China where environmental concerns have increased people's interest in green products and services. The authors used the partial least squares approach to test the hypotheses using 521 valid responses.

The current study aims to better understand how potential visitors adopt green hotels. It details the favorable interaction effects of personal norms and perceived green hotel attitudes on identification and trust as well as the adverse interaction effects of social norms and perceived green hotel features on trust. However, no statistically significant relationship exists between perceived green hotel attributes and social norms on identification.

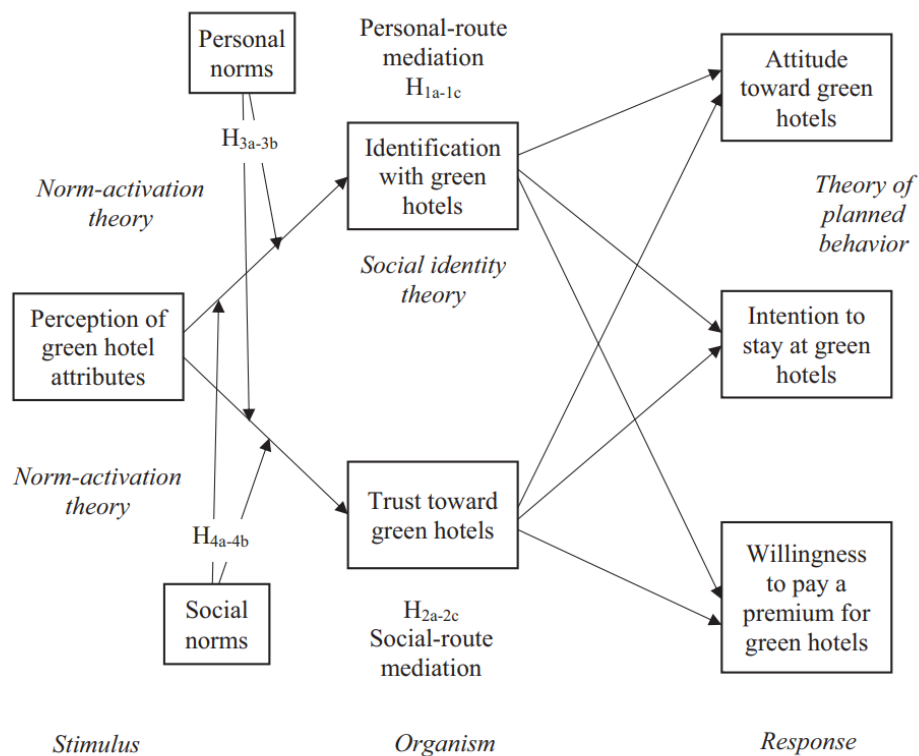


Figure 2. 3: Conceptual model (Balaji et al., 2019)



### 2.2.3 The model of Yadav et al. (2019)

The research paper of Yadav et al. (2019), sheds light on the factors that influence travelers' intentions to adopt green hotels in India. The study highlights the importance of psychological and contextual factors in shaping travelers' preferences for green hotels. Through the use of SEM and fuzzy set qualitative comparative analysis, the authors analyzed 347 responses from Indian travelers and found that “green trust” emerged as the most significant and necessary condition for choosing green hotels. This study makes a valuable contribution to the hospitality management literature, emphasizing the need to consider both TPB and contextual factors while investigating customers' pro-environmental behaviors. By exploring the interplay between these factors, the authors offer valuable insights into the complex managerial process that underpins travelers' adoption of green hotels.

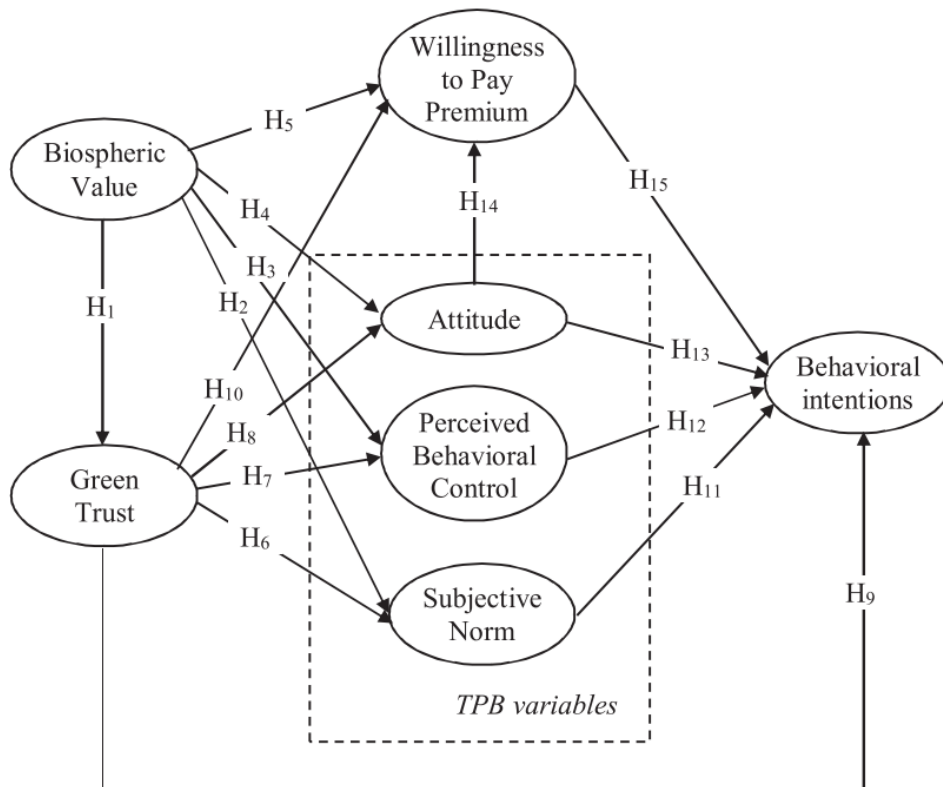


Figure 2. 4: Conceptual model (Yadav et al., 2019)

#### 2.2.4 The model of Nimri et al. (2020)

In this research, the authors aimed to provide a comprehensive conceptual model, based on the TPB, to explain how consumers' staying intentions at the green hotels are formed. A novel set of belief items with salient referents and consumer green hotel knowledge were initially found as major determinants inducing the intents to stay at green hotels via an exploratory qualitative method. In the quantitative phase, the proposed model combines the TPB with the knowledge and belief constructs related to green hotels.

The data was collected by questionnaire survey technique and distributed to Australian travelers who had stayed at least one night in a hotel in the last twelve months and intended to purchase green hotel accommodation in the near future. Active Australian travelers who are 18 years old and above, and representing different gender and professions were recruited via snowball sampling to participate in focus group sessions.

The results of the study successfully generated beliefs about patronizing a green hotel and exposed important aspects regarding additional elements affecting consumers' intentions to stay at such hotels. The majority of participants identified green hotel knowledge as the main driver spurring their green hotel patronage intentions. Overall, more than 85 percent of the participants mentioned green hotel knowledge and indicated that their lack of information about the employment of environmental initiatives in green hotels hinders their decisions regarding staying at such hotels. Hence, green hotel knowledge was identified as an additional factor driving their decision to patronize green hotels.

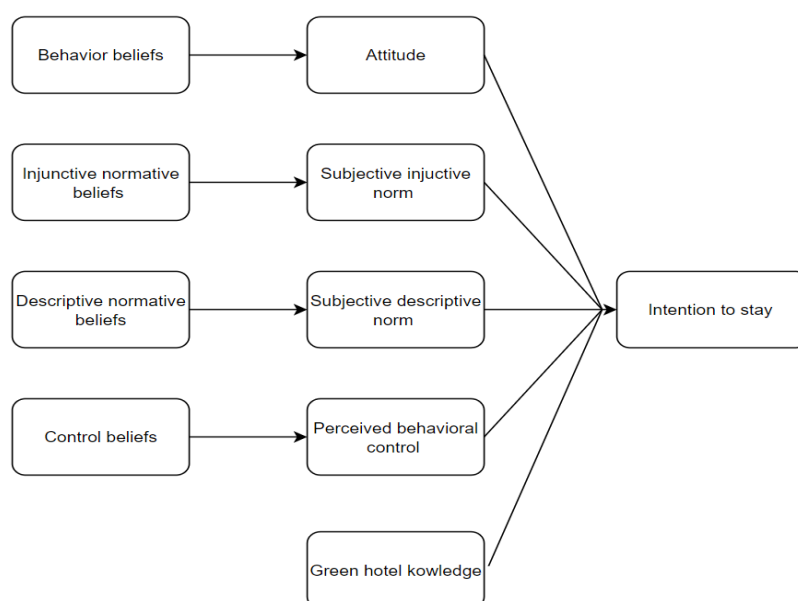
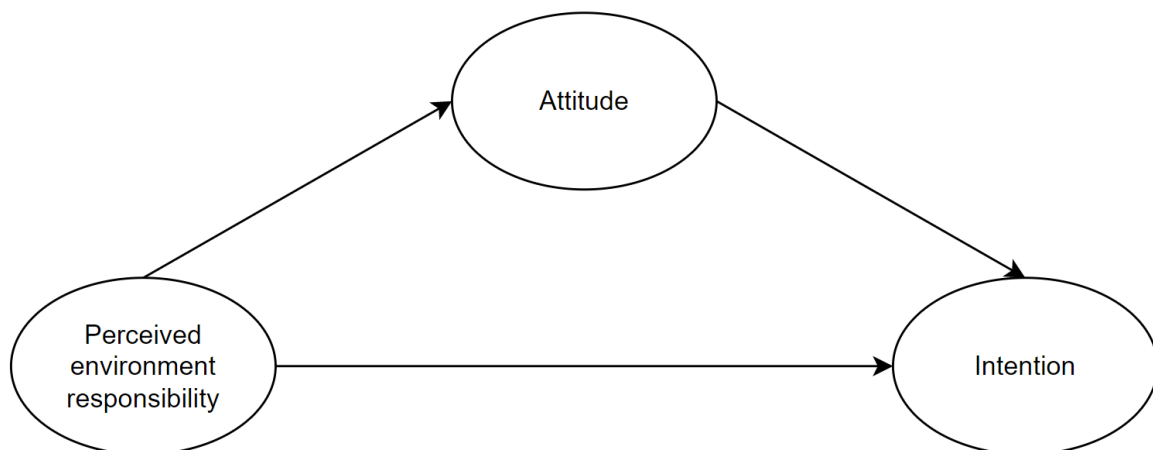


Figure 2. 5: Conceptual model (Nimri et al., 2020)

### 2.2.5 The model of Patwary et al. (2021)

The research paper of Patwary et al. (2021) aimed to investigate how tourists' perceptions of their environmental obligations affect their attitudes and intentions to stay at green hotels in Malaysia. It also sought to investigate the role of attitude in mediating the relationship between environmental perceptions and intention to visit green hotels in Malaysia.

The study examined the impact of perceived environmental responsibility on tourist attitudes using a quantitative research method. After getting in touch with International tourists in Malaysia, had gathered 393 utilizable responses, in several tourist spots in Malaysia. The data that authors used to implement their study were gathered via a survey that systemic random sampling and a Likert scale of one to seven points (strongly disagree to agree strongly) has been used to measure questions. Thus, they conducted data analysis by using data analysis software Smart-PLS version 3 and SPSS 24. Their theoretical model includes two dependent variables, attitude, and perceived environmental responsibility, which affect the intention to visit the green hotel. As a result Patwary et al. (2021), the research asserted that an environmentally sustainable perception is a factor that creates a positive attitude toward visits to green hotels.



*Figure 2. 6: Conceptual model (Patwary et al., 2021)*

### 2.2.6 The model of Sultana et al. (2022)

Sultana et al. (2022) conducted research using the Partial Least Square (PLS) method to investigate the perceptions of the hotel industry in Dhaka, Bangladesh regarding visits to green hotels. It first seeks to investigate the impact of guests' perceived green knowledge and environmental concern on their desire to stay at green hotels; second, it tries to clarify the mediating function of green trust among the factors considered.

After investigating green hotel visit perceptions of 213 customers of the hotel industry of Dhaka, Sultana et al. (2022) used the PLS method. Data was collected using a standard structured questionnaire, the survey shows that clients pick green hotels because they are aware of the environment and have faith in the independent variables. The results of this study may help hotel company managers to comprehend the driving forces behind selecting green hotels and implementing green practices in their operations as necessary.

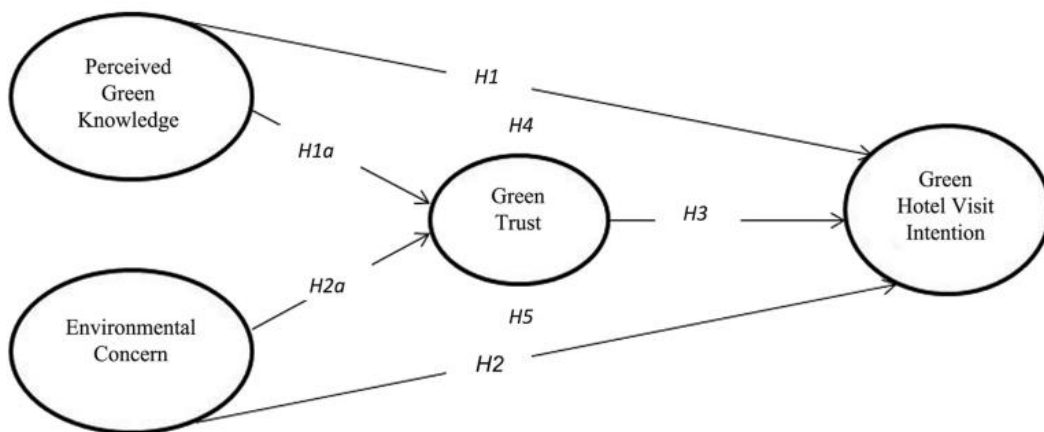


Figure 2. 7: Conceptual model (Sultana et al., 2022)

## **2.3 Proposed model and development hypotheses**

### **2.3.1 Green hotel knowledge**

In the tourism industry in general and the hotel industry in particular, the impact of hotels on the environment has become a focal point and has been chosen by scholars as a research topic recently (Han et al., 2010; Kim and Han, 2010). These studies mainly consider green hotel staying intention, willingness to pay for green hotels, and tourists' revisit and recommendation intentions (Han et al., 2010). However, whether the survey participants really understand green hotels, and whether that knowledge source is enough to create the intention to stay in green hotels. In order to minimize unexpected gaps in the literature, this study examines the moderating effects of tourists' knowledge of green hotels on their stay behavior. According to Han et al. (2010), a green hotel is an eco-friendly accommodation facility that adheres to ecologically healthy programs and practices. Not stopping there, Laroche et al. (2001) asserted that knowledge affects all stages of the consumer managerial process. To sum up, green hotel knowledge (GHK) is related to consumers' information about the hotel that supports green and ecological practices in protecting the surrounding in their business operation (Chen and Peng, 2012).

Hypothetically, Sultana et al. (2022) claimed that customers' green knowledge plays a crucial part in contributing to the understanding of environmental issues; through which a positive outlook for green consumer choice can be developed. Therefore, in this study, the green hotel knowledge variable is included in the model to consider the customer's intention to stay in a green hotel.

**H1a: Green hotel knowledge is significantly associated with Intention to stay at the green hotel**

Not stopping there, environmental knowledge can enhance trust in green products or services (Sultana et al., 2022). In addition, Balaji et al. (2019) also stated that companies could build customer trust when providing their environmental protection policies. Moreover, besides providing information on green policies, companies can also propagate environmental protection measures to consumers (Sultana et al., 2022). This allows customers to raise awareness of environmental protection, and have faith in green products and services simultaneously (Gil and Jacob, 2018). Therefore, green hotel knowledge can increase customers' green trust in green services. Thus, we can propose the following:

**H1b: Green hotel knowledge is significantly associated with Green trust**

### **2.3.2 Environmental concern**

When it comes to environmental concern, previous studies have emphasized the importance of such concerns in predicting consumers' environmentally oriented (Kim and Han, 2010; Laroche et al., 2001). Furthermore, the literature related to marketing and psychology has provided evidence that there is a link between people's green purchasing decisions and their environmental concerns (Kim and Choi, 2005; Tina et al., 1997). Kim and Choi (2005) also stated that an individual's level of environmental concern reflected their overall attitude towards the environment and it has been identified as a robust predictor of environmentally conscious actions, such as engaging in recycling or making environmentally-friendly purchases. In addition, according to Dunlap and Jones (2002), environmental concern represents any individual's understanding and general orientation towards environmental conservation and supports efforts to address or is willing to participate in dealing with the harmful effects of environmental pollution. Moreover, Wang et al. (2018) claimed that consumer concern about environmental issues has increased dramatically over the last two decades. Thereby, an individual's environmental concerns will influence specific behaviors through situation-specific beliefs and attitudes. Meanwhile, the more people are interested in environmental trends, the greener purchasing behavior increases (Laroche et al., 2001; Yadav and Pathak, 2016). Therefore, environmental concerns are a reliable factor in our survey model with the aim of better understanding consumers' staying intention.

#### **H2a: Environmental concern is significantly associated with Intention to stay at the green hotel**

On the other hand, consumer trust is an important determinant to form and maintain consumer behavior (Lee et al., 2011). To be more precise, customers with better environmental awareness are more likely to support green companies and are willing to pay higher fees for green services (Han et al., 2011; Kang et al., 2012). At the same time, Sultana et al. (2022) also mentioned that customers who have a high-level awareness of environmental issues may get more interested in green services due to the presence of green trust in their concerns. Moreover, Gil and Jacob (2018) also showed the impact of emotional state on consumer behavior. Concern for the environment is an emotion that can instill faith in green products or services, such as green hotels. Thus, the following assumption can be proposed:

#### **H2b: Environmental concern is significantly associated with Green trust**

#### **H2c: Environmental concern is significantly associated with Customer attitude**

### **2.3.3 Green trust**

Consumers' green trust reflects businesses' dependable, regular, and consistent environmental behavior (Hameed and Waris, 2018). Green trust, according to Kim and Choi (2005), is the capacity of goods and services to satisfy customer needs while guaranteeing environmental preservation. Because sustainability is a result of trust, green trust emphasizes the connection between customers and the natural world (Alamsyah et al., 2020). In conclusion, developing customer-company connections requires the development of green trust, particularly in the context of the tourist and hospitality industries.

#### **H3: Green trust is significantly associated with Intention to stay at the green hotel**

In the current study, we suggest using the green trust's mediating component as a guide to adopting green hotels. Goh and Balaji (2016) contended that trust is a must to encourage positive responses to green hotels. Owing to the popularity of sustainability and green ideas in the travel and tourism industries (Pereira-Moliner et al., 2015), hotels' green initiatives may help to build their brand's reputation and foster more green trust. In order to address concerns regarding environmental preferences, Gil and Jacob (2018) additionally took into account the mediation effect of green trust in their investigation. Moreover, consumers' real purchasing behavior may be severely impacted by their lack of trust and confidence. In order to determine customers' intentions and behaviors towards green purchases, green trust has also been used as a mediator between a number of dimensions.

#### **H4: Green trust mediates the relationship between Green hotel knowledge and Intention to stay at the green hotel**

#### **H5: Green trust mediates the relationship between Environmental concern and Intention to stay at the green hotel**

### **2.3.4 Perceived customer effectiveness**

Several academics have noted that some pro-social factors may be included in the TPB model to remedy its flaws (Jang et al., 2015), but the additional variables must adhere to specific standards. Kim and Choi (2005) defined perceived customer effectiveness (PCE) as the degree to which an individual perceives that their actions can contribute to resolving a particular problem. When individuals perceive that their endeavors can be very effective in reducing environmental problems, they may exhibit a greater tendency to foster

environmentally responsible attitudes, behaviors, and consumption (Kim and Han, 2010). Roberts (1996), in examining the profiles of green consumers, using the data from a nationwide survey, found the critical role of perceived customer effectiveness in explaining ecological consumer behaviors. Specifically, his findings indicated that customers, who strongly believe that they can abate environmental problems and strongly feel that their ecological efforts can be effective in reducing environmental harms, are more likely to participate in environmentally conscious activities and make an eco-friendly buying decision. Therefore, a high degree of perceived customer effectiveness is required to enable the conversion of consumers' favorable attitudes into pro-environmental behaviors (Wang, 2010).

The consumers perceived that their behavior benefited the environment, thus increasing their likelihood to engage in pro-environmental behavior, when compared to those who perceive negative consequences (Wang, 2010). Han and Yoon (2015) measured the impact of perceived customer effectiveness on the decision-making process in green hotel selection. According to the findings, there is a substantial positive correlation between perceived customer effectiveness and customers' intention to stay as well as between perceived customer effectiveness and a favorable attitude toward customers' staying intention.

**H6a: Perceived customer effectiveness is significantly associated with Intention to stay at the green hotel**

**H6b: Perceived customer effectiveness is significantly associated with Customer attitude**

### **2.3.5 Customer attitude**

Attitude refers to an individual's favor or unfavor to carrying out the conduct, and the individual's overall appraisal of a certain activity (Tonglet et al., 2004; Han et al., 2010). It plays a crucial role in predicting an individual's behavior toward environmental sustainability. People's attitudes towards eco-friendly practices are key determinants of their willingness to make green choices. According to Kaiser et al. (1999, 2007) and Park et al. (2014), positive environmental attitudes are associated with pro-environmental behavior, whereas negative attitudes can lead to resistance to green practices. Implementing green policies can shape people's environmental attitudes and behaviors. Furthermore, customers' attitudes will influence their intention to stay at green hotel, spread positive word-of-mouth praise, and will be more likely to use such hotels in the future (Chen and Peng, 2012; Han et al., 2011; Han



and Kim, 2010; Han et al., 2009). Therefore, customer attitude (CA) is a key factor when it comes to identifying customer intention to stay in green hotels.

**H7: Customer attitude is significantly associated with Intention to stay at the green hotel**

When customers form a positive attitude to a specific behavior, they are more willing to have intention and willingness to be involved in the behavior. According to Agag and Colmekcioglu (2020), in the hospitality industry, guests are more likely to choose green hotels if they perceive them as beneficial to society and the environment. Moreover, Chen and Tung (2014) suggested that customers may have a positive attitude toward staying at green hotels because of their concerns for the environment, which motivates them to take actions that promote environmental protection. In addition, Jauhari and Manaktola (2007) also stated that when tourism enterprises have implemented their green practices, they have increased the customer's attitude toward green hotels or their intention to stay at a green hotel. Therefore, it can be inferred that customers who have a strong environmental consciousness are more likely to choose green hotels through a positive attitude towards such accommodations.

**H8: Customer attitude mediates the relationship between Environmental concerns and Intention to stay at the green hotel**

Roberts (1996) indicated that customers who strongly believe in their ability to make a difference in reducing environmental harm are more likely to engage in environmentally conscious activities and make eco-friendly purchasing decisions. The research by Straughan and Roberts (1999) supported this by demonstrating that people who believe their efforts can contribute to solving ecological problems are more active in eco-friendly behaviors. Similarly, Han et al. (2009) found that customers' positive attitudes toward environmentally conscious behaviors stem from their belief in their ability to affect environmental problems. Therefore, it can be inferred that individuals who perceive their efforts as effective in addressing environmental issues are more inclined to engage in eco-friendly behaviors and positive attitudes toward hotels adopting green practices which influence choosing to stay at green hotels (Kim and Han, 2010). Based on the studies mentioned above, we would like to investigate further the ability of customer attitude to mediate between perceived customer effectiveness and intention to stay in green hotels.

**H9: Customer attitude mediates the relationship between Perceived customer effectiveness and Intention to stay at the green hotel**

The table below illustrates the influence between variables proposed in a variety of related models:

	<b>Effect</b>	<b>References</b>
H1a	GHK → INTS	Jiang and Gao (2019); Nimri et al. (2020); Sultana et al. (2022)
H1b	GHK → GT	Gil and Jacob (2018); Balaji et al. (2019); Sultana et al. (2022)
H2a	EC → INTS	Wang et al. (2018); Demir et al. (2021); Sultana et al. (2022)
H2b	EC → GT	Paul et al. (2016); Özel et al. (2017); Wang et al. (2018); Nimri et al. (2020); Demir et al. (2021); Yan et al. (2021); Sultana et al. (2022)
H2c	EC → CA	Wang et al. (2018); Wang (2020)
H3	GT → INTS	Choi et al. (2015); Balaji et al. (2019); Sultana et al. (2022)
H4	GHK → GT → INTS	Sultana et al. (2022)
H5	EC → GT → INTS	Sultana et al. (2022)
H6a	PCE → INTS	Roberts (1996); Wang et al. (2018)
H6b	PCE → CA	Straughan and Roberts (1999); Wang et al. (2018); Wang (2020)
H7	CA → INTS	Manaktola and Jauhari, (2007); Han et al. (2009, 2010, 2011); Han and Kim, (2010); Suki (2015); Yadav et al. (2019); Patwary et al. (2020); Nimri et al. (2020)

*Table 2. 1: Illustrates the influence between variables in a variety of related models*

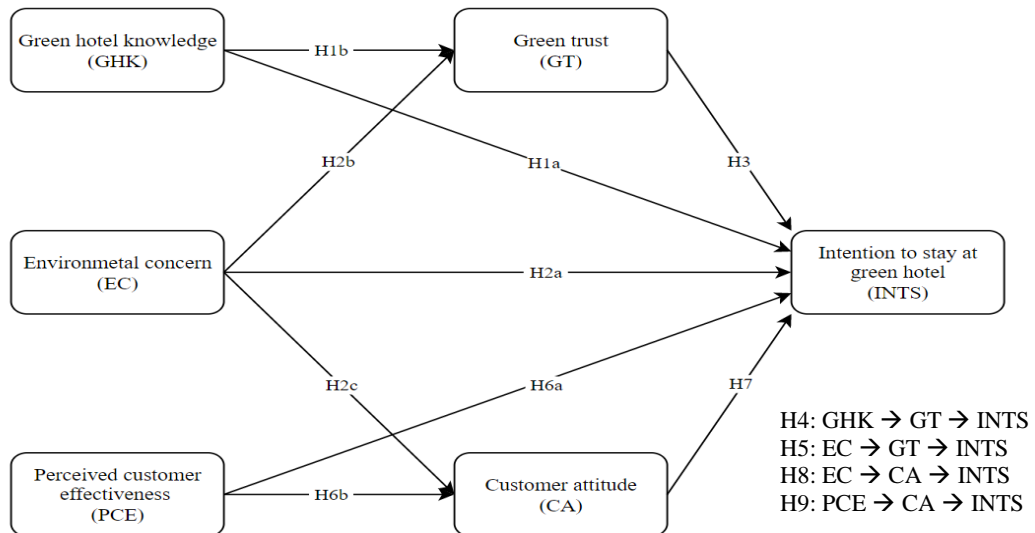


Figure 2. 8: Conceptual model

## 2.4 Literature gaps

Despite the growth of the green hospitality industry in Vietnam, there is still a lack of research on customer behavior toward green hotels. While studies have been conducted on the economic and environmental impacts of green hotels, little is known about how customers perceive and behave toward these establishments.

Compared to other factors, the intention to use green hotels in Vietnam has fewer investigations that study this matter. Most researchers study the use of green and sustainable travel instead. Intention to stay although has been demonstrated to be an important variable in hotel research, which was not well examined in Vietnam. Future research should use this variable, either independently or in conjunction, to explore the intention to stay at the green hotel in Vietnam as well as throughout the world, as both are important components in tourism research.

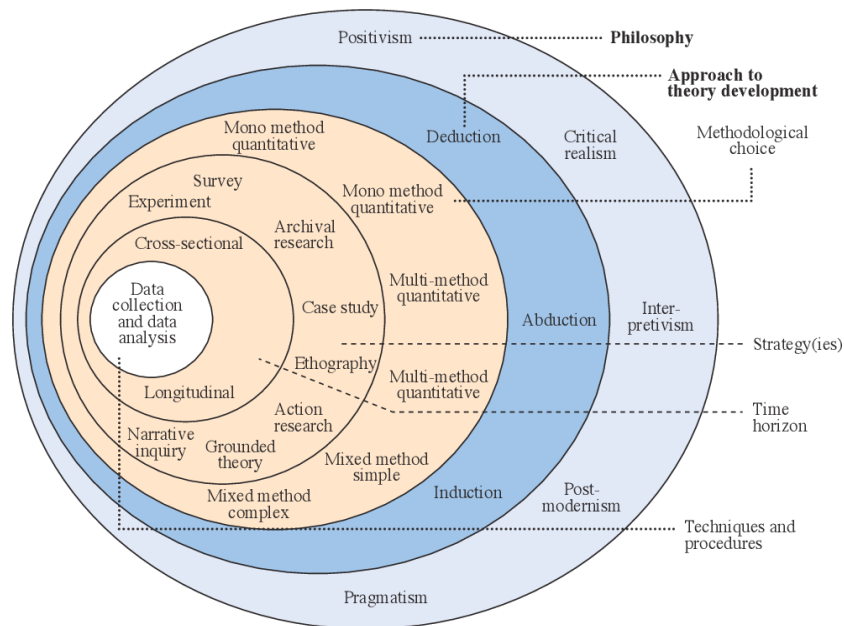
Customer awareness and thinking are also highly beneficial variables for marketing and hospitality firms, especially after the Covid pandemic. Understanding the psychological process or purpose behind a customer's motives or behavior will allow company owners to change their strategy as well as their physical and digital infrastructure to attract new consumers and keep loyalty among existing ones. Yet, there hasn't been any study that addresses this element; instead, most focus on the destination itself, as well as its characteristics and features. Future research could involve a study of customer behavior in order to arrange a new part of the advice that is more practical and appropriate.

# CHAPTER 3: METHODOLOGY

## 3.1 Research philosophy and Research approach

### 3.1.1 Research philosophy

Each researcher is guided by a distinct approach in their research paper. For clarification, research philosophy pertains to the underlying assumptions, knowledge, and nature of the study (Biggam, 2017). Although the term is quite broad and seemingly confusing, it can be described as what you do when starting a research project to continue to gain and develop knowledge in a specific field. In general, acknowledging assumptions is required while addressing research philosophy in a dissertation. Defining the research philosophy is located in the outermost layer of the “Research onion” as shown in the figure below. As a result, this is the first topic addressed in the thesis research methods chapter.



e 1. Research onion<sup>1</sup>

Figure 3. 1: The “Research Onion” model (Mark et al., 2012)

According to Žukauskas et al. (2018), four major research philosophies have been distinguished and discussed in the works: the positivism research philosophy, interpretivism research philosophy, pragmatism research philosophy, and realistic research philosophy.

### **Positivism research philosophy**

Positivism is a philosophy that upholds the belief that only knowledge based on factual observations through the senses, including measurement, can be considered trustworthy. In studies that adopt a positivist approach, the role of the researcher is primarily limited to the objective collection and interpretation of data. In essence, a researcher who adopts this approach seeks to be an unbiased analyst, keeping personal values or biases that could affect the study at a distance. Such research primarily concentrates on observable and quantifiable data, with statistical analyses often used to identify patterns and relationships within the data.

For many years, positivism has been a significant research philosophy in business and management. It stresses the collection of empirical data through systematic observation and relies on the idea that knowledge is derived from human experience. Biggam (2017) confirmed that positivism has an atomistic ontological view of the world, viewing it as consisting of separate, observable elements and events that interact in a visible, determined, and predictable way.

### **Interpretivism research philosophy**

Interpretivism research involves researchers interpreting different aspects of the study. This approach takes into account the human interests that are involved in the study. Essentially, interpretivism integrates human interests into the research process. According to interpretivism researchers, reality can only be accessed through social constructions, such as language, shared meanings, consciousness, and instruments. In other words, the interpretation of these social constructions is a key component of interpretivism research. The criticism of positivism in social studies forms the foundation of interpretivism philosophy. Therefore, this philosophy emphasizes qualitative analysis over quantitative analysis.

The term "interpretivism", which is "used to group together diverse approaches, including social constructivism, phenomenology, and hermeneutics; approaches that reject the objectivist view that meaning resides in the world independently of consciousness", is "associated with the philosophical position of idealism". The interpretivism approach emphasizes the significance of recognizing and appreciating differences between individuals as social actors. This approach typically centers on understanding the meaning of human experiences and may utilize multiple research methods to explore various aspects of the issue

being studied. Interpretivism research takes into account the context and subjective experiences of individuals to gain a deeper understanding of the issue at hand (Biggam, 2017).

### **Pragmatism research philosophy**

Pragmatism research philosophy accepts concepts to be relevant only if they support action. A pragmatic approach "acknowledges that there are many different ways to interpret the world and conduct research, that no single point of view can ever give the entire picture, and that there may be multiple realities".

The theories of positivism and interpretivism, which both focus on the structure and origins of knowledge, are utterly incompatible with one another. One of these two major paradigms generally encompasses many dissertation subjects. The need for experienced scholars to "modify their philosophical assumptions over time and move to a new position on the continuum" does arise from time to time. The modified philosophical assumptions are adopted by pragmatic researchers, who have usually experienced researchers (Biggam, 2017).

### **Realistic research philosophy**

The research theory of realism is based on the notion that truth is independent of the intellect. This way of thinking is predicated on the notion that information is developed scientifically. Direct realism and analytical realism are the two categories of realism. What you see is what you get is how direct realism, also referred to as naive realism, is defined. Direct realism, in other terms, presents the universe as experienced by individual human senses. Critical realism, on the other hand, contends that people actually do feel and see the true world. Sensations and depictions of the real world, according to critical realism, can be misleading and frequently do not accurately represent the real world (Biggam, 2017).

Research philosophy is divided into several categories, each with a different character and serving different purposes. In this study, the research method we choose is positivism. Positivism collects factual knowledge and information through surveys, observations, and interviews. For such a practical survey, it is advantageous to have reliable and representative research results, and this is an entirely appropriate method consistent with research to reach a wide range of customers aiming to stay at the green hotel.

### **3.1.2 Research approach**

Arguing is the process of concluding, making predictions, or formulating explanations based on existing knowledge. Flach and Kakas (2000) mentioned that deductive, inductive, and abductive reasoning are the three types of reasoning.

#### **Deductive reasoning**

Deductive reasoning is a logical process that moves from broad premises to a precise conclusion.<sup>18</sup> It is a top-down method of reasoning that moves from a broad assertion or guiding concept to a certain conclusion with certainty. Among other terms, deduction is also known as the derivation of a conclusion through reasoning. Keith and Robert (2005) mentioned that the strength of deductive reasoning is a sound logical argument ensures that if the premises are true; therefore, the conclusion must also be true. However, the main disadvantage of deductive reasoning is that it completely prevents you from learning new because every logical argument is based on an assumption or presumption. Therefore, when reasoning from an argument that seems very reasonable turns out to be false, all passages lose all of their meaning.<sup>19</sup>

#### **Inductive reasoning**

Bisanz (1994) illustrated that inductive reasoning is a process that progresses from specific observations or examples to a more general conclusion. It is a bottom-up reasoning approach that begins with specific observations or examples and progresses to a more general conclusion. Although inductive reasoning cannot give a definite conclusion like deduction reasoning, it can actually enhance one's knowledge through past experiences and future experiments. The author also described that it can predict future events or phenomena that have not yet been observed. Not stopping there, inductive investigations did not need hypotheses at the start of the research.<sup>20</sup> Overall, inductive reasoning is a useful tool for developing new ideas and theories; however, careful observation and evaluation are required to ensure that the conclusions are evidence-based.

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<sup>18</sup> <https://www.butte.edu/departments/cas/tipsheets/thinking/reasoning.html> [Accessed 04: April 2023]

<sup>19</sup> <https://www.butte.edu/departments/cas/tipsheets/thinking/reasoning.html> [Accessed 04: April 2023]

<sup>20</sup> <https://www.merriam-webster.com/words-at-play/deduction-vs-induction-vs-abduction> [Accessed 04: April 2023]

## **Abductive reasoning**

Gordon (2022) illustrated that the abductive reasoning approach is the logical process of making observations and looking for the hypothesis that would best fit or explain those observations. Thus, the best prediction is made by analyzing a set of imperfect observations. Abductive reasoning has a different definition than deductive and inductive approaches. It is also referred to address weaknesses associated with deductive and inductive approaches. In particular, abductive reasoning overcomes the lack of clarity in terms of how to select a theory to be tested via formulating hypotheses and the lack of experience for theory building of the above two types of approaches. Hence, abductive reasoning is highly creative.

To conclude, based on the characteristics of our study, deductive is considered the most suitable research method in order to determine the needs of customers staying at green hotels in Vietnam, the obtained factors will be reasoned and evaluated in a logical way before reaching the final conclusion.

## **3.2 Research methodology**

### **3.2.1 Quantitative research definition**

Burns and Grove (2005) defined quantitative research as a systematic and objective approach that utilizes structured and logical methods to generate and enhance knowledge in analyzing. This kind of research involves collecting data from a substantial sample that is representative of the entire population (Malhotra and Peterson, 2006). Its distinguishing feature is the use of larger respondent samples, and it focuses on obtaining numerical data, aggregating it across groups, and predicting or explaining particular phenomena. The information gathered in this type of research is categorized into numbers, quantities, ratios, incidence, and prevalence.

### **3.2.2 Quantitative research characteristics**

#### **Characteristic**

Compared to qualitative research, quantitative research is easier for researchers to employ since it deals with numeric data, measures variables related to the study aim, and examines the correlation between them by converting the gathered data into numerical statistics.



## **Advantages**

According to Carr (1994), one of the advantages of quantitative research is that it allows for the objective and systematic investigation of phenomena. Therefore researchers can eliminate or minimize the potential influence of personal biases and subjectivity and ensure their findings are based on reliable and valid data. In addition, Connolly (2007) noted that quantitative research often involves larger sample sizes, which can enhance the representativeness and generalizability of the findings. Researchers can draw more robust conclusions that apply to a broader population. Another advantage that Carr (1994) and Connolly (2007) highlighted is the ability of quantitative research to measure and analyze numerical data. This allows for statistical analyses that can identify patterns, relationships, and differences in data, which can help to explain and predict phenomena. Moreover, quantitative research often employs standardized instruments and methods, which can increase the reliability and validity of the data. To sum up, the advantages of quantitative research include its objectivity, systematic approach, larger sample sizes, and ability to measure and analyze numerical data using statistical methods.

## **Disadvantages**

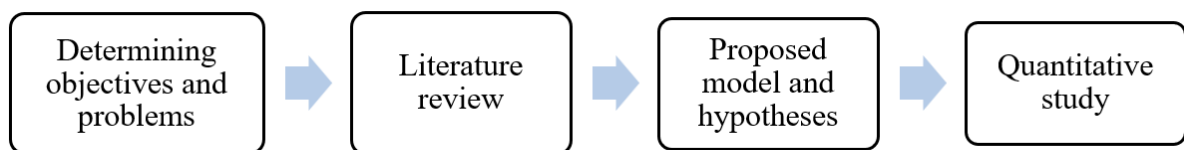
On the other hand, quantitative research often focuses on numerical data and may not fully capture the nuances of human experience or emotions. This method typically measures a limited number of variables and may not capture all the relevant aspects of a phenomenon or situation. Even with a structured approach, there is still the potential for researcher bias in selecting research participants, design of research instruments, and data analysis. Furthermore, quantitative research typically measures variables and analyzes numerical data, which may not be the most appropriate approach for all research questions. Quantitative research often relies on pre-existing theories and frameworks, which may limit the ability to explore new perspectives or understandings of a phenomenon. Overall, quantitative research includes its potential difficulty in capturing the complexity of human experience, limited scope, the potential for researcher bias, limited suitability for certain research questions, and reliance on pre-existing theories and frameworks (Rahman, 2016).

### 3.3 Research design

According to Creswell (2014), the research design is "a blueprint for conducting a study with maximum control over factors that could interfere with the validity of the findings". In other words, research design refers to the plan or strategy a researcher uses to conduct a study systematically and rigorously. The design helps to ensure that the study is well-organized, has clear objectives, and uses appropriate methods to collect and analyze data. A good research design is critical to the success of a study, as it can help to minimize bias and maximize the validity and reliability of the findings.

In this research, we follow the four steps stated as below:

- Step 1: The main objective of this study is to determine which factors impact customer satisfaction and intention to stay in a green hotel in Vietnam.
- Step 2: Do a literature review to find, synthesize, and evaluate all scientific studies on the subject or research question. It is critically assessing a link between various study findings and connecting them all to the research.
- Step 3: After carefully examining the prior models in the preceding studies, the research model for this study generates and constructs hypotheses. Furthermore, the research model depends on specific case studies to fit the research method.
- Step 4: Quantitative research assesses attitudes, behaviors, opinions, and other aspects to corroborate or refute a proposition. To obtain "numerical data", closed-ended inquiries such as Likert scales or multiple-choice inquiry forms are utilized. In order to gather and analyze respondent data, questions must be objective.



*Figure 3. 2: Research Design*

### **3.4 Data resource**

Data resources are any data sources that can be used for analysis, decision-making, or other purposes. These resources can be categorized in various ways depending on their nature, purpose, and scope. All of these fall into one of two categories: primary and secondary data.

#### **3.4.1 Primary data**

According to Flowerdewa and Martin (2013), primary data refers to information collected by the researcher themselves, specifically for the purpose of their research project. Examples of primary data collection methods in human geography might include conducting surveys, interviews, focus groups, or observations in a particular research site or community. Primary data can also be collected through experiments or fieldwork, where the researcher actively engages with the environment or phenomena they are studying to gather data.

Using primary data can be advantageous for researchers, as it allows them to tailor their data collection methods to their specific research questions and objectives. However, primary data collection can be time-consuming and resource-intensive compared to using secondary data. It is also important for researchers to ensure their data collection methods are ethical, reliable and they have appropriate measures in place to protect the confidentiality and privacy of their research participants.

#### **3.4.2 Secondary data**

In the context of Flowerdew and Martin (2013), secondary data refers to information that has already been collected by someone else for a different purpose and is being reused by the researcher in their own project. Examples of secondary data in human geography might include data collected by government agencies, non-government organizations, academic institutions, or private companies. This can include statistical data, survey data, or information from published sources such as books, newspapers, or academic articles.

Using secondary data can be advantageous for researchers, as it can save time and resources compared to collecting primary data from scratch. However, it is important to critically evaluate the quality and reliability of the data, as well as consider issues of bias or limitations in the original data collection process.

### **3.5 Data collection method**

The survey is sent to groups interested in experiencing accommodation services to synthesize people's opinions to assess the factors affecting the intention to stay at a green hotel.

#### **3.5.1 Target sample**

The objective of the survey is to find out the factors affecting the intention to experience and stay at green hotels in Vietnam.

##### **Target sample**

- Survey type: Online survey
- Age: 18 years old and above
- Gender: All genders
- Scope of the research: Vietnamese and foreigners long-term living in Vietnam
- Occupation: All professions

##### **Target size**

According to Hair et al. (2017), the minimum sample size shall safeguard that the results of the statistical method such as Partial Least Square (PLS) have adequate statistical power. Furthermore, the minimum sample size shall ensure that the results of the statistical method are robust and the model is generalizable because an insufficient sample size may lead to PLS results that highly differ from those of another sample. For this reason, Hair et al. (2017) have suggested using the 10-time rule (Barclay et al., 1995). This rule suggests that the minimum sample should be equal to 10 times the most significant number of formative indicators used to measure a single construct or 10 times the largest number of structural paths directed at a particular construct in the structural model.

This rule is equivalent to saying that the minimum sample size should be 10 times the maximum number of arrowheads pointing at a latent variable anywhere in the PLS path model. Our model consists of a particular construct, so following this 10-time rule, our minimum sample size must be 50 respondents. Finally, 306 valid responses were collected from 07 March to 14 March and they were valid and analyzed after data cleaning.

### **3.5.2 Sampling method**

Individuals have an undetermined likelihood of being included in the sample in a non-probability sampling approach, with part of the probability being zero (Vehovar et al., 2016). That is to say, the items in the sample must have a more compelling reason for being there than the other ones. Non-probability sampling techniques include convenience, purposeful, quota, and snowball sampling.

The auditor will use snowball sampling to collect the survey response in this study. Snowball sampling is a well-known non-probability survey sample selection method commonly used to locate hidden populations. This method depends on initial sampling respondents referring to other people who think they have the desired trait to them. A nonprobability form of survey sample selection, snowball sampling, also known as chain referral sampling, is frequently used to find rare or hard-to-find populations. This approach has some drawbacks, such as reliance on informants' subjective assessments, non-random selection processes, relationships between network size and selection probabilities, and privacy issues. On the other hand, this sampling method's cost-effectiveness and efficiency are benefits.

### **3.5.3 Questionnaire design**

The questionnaire has four sections including the introduction section, the subject screening questions section, the main section, and the demographic section. The introduction section gives interviewees the overall information about the green hotel definition and the green hotel in Vietnam. The subject screening questions section is designed to identify the target respondents for this study. The main section asks the respondents about their opinions about green hotel knowledge and experience, behavior, and their intention to stay at green hotels in Vietnam. Last but not least, the demographic section is given to exploit customers' more personal information for research purposes.

After completing the initial survey, it is sent to the pilot tester to collect comments to improve and edit the survey so that it is easiest to understand and accessible but still has enough information for the research team. This survey was sent out to the experts and target respondents within a week. The survey was sent to hotel management lecturers at FPT University and employees who have been working in hotels that have obtained green certificates, especially the Intercontinental Hanoi WestLake hotel to get more professional suggestions. Moreover, the research team also sent the survey to hotel management experts

and those who regularly experience accommodation services. This tester group could give their opinions on the questions from the perspective of both professionals and travelers. These comments and suggestions allow the team to adjust the survey, refine the questions to suit the target audience better, and ensure the validity of measurement scales.

After collecting comments from the pilot tester, the team have continued to research and refine the survey to make it more comfortable for the respondents while having enough necessary information to be obtained. Once the full survey was in place, the group sent the survey to relatives and asked them to send it more widely to the relationships. In addition, the project team also launched surveys to tourism websites and foreigners living in Vietnam to collect opinions on the desire to stay in green hotels when traveling in Vietnam. During the survey submission process, the team also had some difficulties in accepting postings to the group, so there was a delay in the initial survey data. However, after seven days of surveying from March 7 to March 14, 2023, the team collected a total of 306 valid survey respondents. These responses are enough for us to start processing the data to complete the report.

### 3.5.4 Measurement models

#### 3.5.4.1 Green hotel knowledge

We decided to take a set of measurement questions from many previous researchers (Chen and Peng, 2012) with three items to measure for the Green hotel knowledge variable.

Code item	Item	Reference
<b>GHK1</b>	Compared to the average person, I am familiar with hotels' environmental policies	Chen and Peng (2012)
<b>GHK2</b>	Compared to my friends, I am familiar with hotels' green programs	
<b>GHK3</b>	Compared to people who travel a lot, I am familiar with hotels' green labels	

*Table 3. 1: Measurement scale of Green hotel knowledge*

### 3.5.4.2 Environmental concern

Four items of environmental concern were taken from the study of Kim and Choi (2005). A higher level of environmental concern is linked to consumer environmentally-oriented behavior (Kim and Han, 2010; Laroche et al., 2001).

Code item	Item	Reference
EC1	I am extremely worried about the state of the world's environment and what it will mean for my future	Kim and Choi (2005)
EC2	Mankind is severely abusing the environment	
EC3	When humans interfere with nature it often produces disastrous consequences	
EC4	The balance of nature is very delicate and easily upset	

*Table 3. 2: Measurement scale of Environmental concern*

### 3.5.4.3 Perceived customer effectiveness

According to Kim and Choi (2005), perceived customer effectiveness is cited as a consideration in guests' choice of a green hotel and is captured by four study items.

Code item	Item	Reference
PCE1	Staying at a green hotel, everyone's behavior will positively affect society	Kim and Choi (2005)
PCE2	I think staying in a green hotel can help save energy	
PCE3	I think staying in a green hotel helps protect the environment	
PCE4	I can't do anything about protecting environment	

*Table 3. 3: Measurement scale of Perceived customer effectiveness*

### 3.5.4.4 Customer attitude

To evaluate the customer attitude, we utilized a group of measurement questions including seven items adapted from Han et al. (2010).

Code item	Item	Reference
CA1	For me, staying at a green hotel when traveling is Extremely bad/ Extremely good	Han et al. (2010)
CA2	Extremely undesirable/ Extremely desirable	
CA3	Extremely unpleasant/ Extremely pleasant	
CA4	Extremely foolish/ Extremely wise	
CA5	Extremely unfavorable/ Extremely favorable	
CA6	Extremely unenjoyable/ Extremely enjoyable	
CA7	Extremely negative/ Extremely positive	

*Table 3. 4: Measurement scale of Customer attitude*

### 3.5.4.5 Intention to stay at the green hotel

Based on the research of Han et al. (2010), we chose a set of three items for variable intention to stay at a green hotel.

Code item	Item	Reference
INTS1	I am willing to stay at a green hotel when traveling	Han et al. (2010)
INTS2	I plan to stay at a green hotel when traveling	
INTS3	I will make an effort to stay at a green hotel when traveling	

*Table 3. 5: Measurement scale of Intention to stay at the green hotel*



### 3.5.4.6 Green trust

In the definition of Choi et al. (2015), green trust refers to a person's readiness to rely on a product, service, or brand, based on the belief or expectation that the product has credibility, is good, and has the ability to perform well in terms of its environmental impact. Essentially, green trust is built on the perception that a product or service is environmentally responsible and trustworthy. Therefore, we used a set of measuring questions from Choi et al. (2015), including five items drawn from several research studies, to assess green trust.

Code item	Item	Reference
GT1	I feel that green hotel's environmental comments are generally reliable	Choi et al. (2015)
GT2	I feel that green hotel's performance is generally dependable	
GT3	I feel that green hotel's environmental arguments are generally trustworthy	
GT4	The green hotels generally keep promises and commitments for environmental protection	
GT5	I feel that the green hotel's environmental concern meets my expectations	

*Table 3. 6: Measurement scale of Green trust*

### 3.6 Data analysis method

Statistical Package for the Social Sciences (SPSS) is used to carry out advanced statistical analysis as well as big data analysis, string analysis, and data analysis using machine learning techniques. One of the most popular and often used programs for quantitative research is SPSS. A researcher must be familiar with the use of this program in order to create exhaustive data analysis. To make it simpler for researchers to organize and produce the proper data using the accepted methodology, SPSS was created.

Smart-PLS is statistical software with the same purpose as Lisrel and AMOS which examines relationships between latent and indicator variables or manifest variables. Smart-PLS Software was used to implement SEM diagram. Researchers may use SEM to examine and alter theoretical models thoroughly (Anderson and Gerbing, 1988). Furthermore, compared to multiple regression, SEM yields greater levels of prediction (Lee et al., 2011). There are two types of SEM: covariance-based SEM (CB-SEM) and partial least squares SEM (PLS-SEM). However, in the framework of the study, we choose to use PLS-SEM because PLS-SEM is primarily used to develop theories in exploratory research and it achieves this by concentrating on describing the variation in the dependent variables.

### **3.6.1 Descriptive analysis**

Descriptive statistics are coefficients that succinctly describe a data group that may or may not be typical of the entire population. Concentration trend metrics and volatility indicators are examples of descriptive statistics. The standard deviation, variance, min, and max are markers of volatility, whereas the mean, median, and mode are tendency measurements.

### **3.6.2 Test of measurement models**

#### **3.6.2.1 Reliability**

Internal consistency dependability is often the first criterion to be assessed. Cronbach's alpha, a conventional measure of internal consistency, estimates the reliability based on the correlations between the observed indicator variables. The validity and dependability of the observed variables for the latent factor are ascertained by testing the reliability of Cronbach's Alpha scale. This test evaluates how closely observable variables related to the same factor are correlated with one another. It demonstrates which observable factors have helped to measure the idea of a factor and which have not. Cronbach's Alpha indicates the findings of the wonderful factor. The observed variables we provide are good fits since they accurately capture the traits of the hidden factor and have a great scale.

Standards for evaluating Cronbach's Alpha scale's dependability include

- According to Nunnally (1978), a measurement variable satisfies the requirements if its corrected item-total correlation value is less than 0.3.

- According to Trong and Ngoc (2008), Cronbach's Alpha coefficient value level is:
  - The scale is superb from 0.8 to about 1.
  - The scale can be used from 0.7 to almost 0.8.
  - The scale is qualified at values of 0.6 and higher.

### **Composite Reliability**

The composite dependability ranges from 0 to 1; higher values denote higher reliability levels. It is typically viewed similarly to Cronbach's alpha, a conservative reliability indicator. Comparatively better reliability estimates are obtained by using composite reliability, which, in contrast, tends to exaggerate the internal consistency reliability. It is reasonable to consider and report both criteria because genuine reliability is typically found between Cronbach's alpha (representing the lower bound) and composite reliability (representing the upper bound) when investigating and evaluating the measures' internal consistency reliability.

In conclusion, the thresholds were conducted in this research:

- Cronbach's Alpha  $\geq 0.7$  (DeVellis, 2012)
- Composite Reliability CR  $\geq 0.7$  (Bagozzi and Yi, 1988)

### **3.6.2.2 Convergent validity**

Convergent validity is the extent to which a measure correlates positively with alternative measures of the same construct. To evaluate the convergent validity of reflective constructs, researchers consider the outer loadings and the average variance extracted.

#### **Outer loading**

Outer loading indicates the degree of association between the observed and latent variables. According to Hair et al. (2017), high outer loadings on a construct indicate the associated indicators have much in common, which is captured by the construct. Another term for the amount of outer loading is indication reliability. The standardized outer loadings should be 0.708 as a general rule of thumb. Moreover, Hair et al. (2017) suggested that the external load system should be greater than or equal to the 0.708 observed variable which is quality. Because  $0.708^2 = 0.5$ , the mean is the hidden variable explained by 50% of the variation of the observed variable. Yet, when using recently designed scales, researchers usually find

reduced outer loadings (0.700) in social science investigations (Hulland, 1999). In general, indicators with outer loadings between 0.400 and 0.700 should only be taken out of the scale if doing so increases the composite dependability by more than the recommended threshold value.

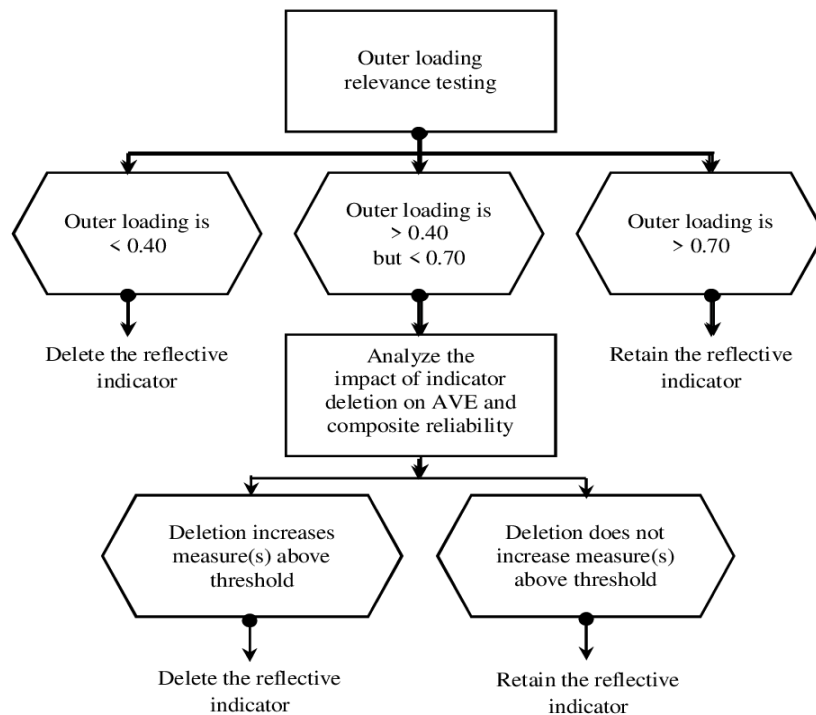


Figure 3. 3: Outer loading relevance testing model

### The average variance extracted

The average variance extracted (AVE) is a typical metric to establish convergent validity on the AVE. The grand mean value of the squared loadings of the construct-related indicators is used to determine this criterion (Hair et al., 2017). Hence, the commonality of a construct is equivalent to the AVE. An AVE value of 0.5 or greater shows that, on average, the construct accounts for more than half of the variance of its indicators, following the same reasoning as with the individual indicators. On the other hand, an AVE of less than 0.5 denotes that, on average, more variance is still accounted for by item errors than by construct variance.

#### 3.6.2.3 Discriminant validity

Discriminant validity refers to the extent to which a measure is distinct from other constructs from which it is theoretically supposed to differ. In other words, it measures what it is

intended to measure and is not influenced by other variables. Discriminant validity is an important aspect of construct validity, which is concerned with the accuracy and relevance of a measure in assessing a specific concept or construct. Establishing discriminant validity involves demonstrating that the measure in question is not significantly correlated with other constructs that are theoretically unrelated to it, thereby providing evidence that it is measuring a unique construct.

### **Heterotrait-Monotrait Ratio (HTMT)**

The HTMT ratio compares the correlations between two constructs to the correlations between those constructs and other constructs in the model. A measure or variable is said to have good discriminant validity if the HTMT ratio is less than 0.9 (Henseler et al., 2015), indicating that the correlation between two constructs is significantly higher than their correlations with other constructs in the model.

### **3.6.3 Test of structural models**

The structural theory explains how the latent variables are connected. The order and position of the constructs are determined by theory or the researcher's experience and expertise. While developing route models, the sequence is from left to right. The variables on the path model's left side are independent, while any variable on the route model's right side is the dependent variable. Furthermore, the variables on the left are demonstrated to be preceding and predicting the variables on the right. Variables, on the other hand, can act as both independent and dependent variables.

According to Hair et al. (2019), Structural Equation Modeling (SEM) is a powerful statistical tool that allows researchers to analyze the relationships between latent and observed variables. Hair describes SEM as a technique for testing complex theoretical models by examining the correlations and causal pathways between multiple variables. He explains that SEM provides a comprehensive approach for examining the validity of hypothetical models and measuring the strength and direction of relationships between the variables. Hair et al. (2019) emphasized that SEM can be used to test models that include multiple dependent and independent variables, making it a valuable tool in many research fields such as psychology, sociology, economics, and business.

### **3.6.3.1 Variance inflation factor**

VIF stands for the variance inflation factor which ranges from 1 or more, higher values indicate a higher degree of multicollinearity. However, if it is above 10, it indicates a high correlation and is worrisome. Besides, based on Kock (2015) recommended that VIF should be below 5.

In this article, we decided to use inner VIF values due to the fact that multicollinearity between independent latent variables is a risky problem. According to Hair et al. (2019), the proposed VIF evaluation threshold is as follows:

- $VIF \geq 5$ : High probability of occurrence of multicollinearity
- $3 \leq VIF \leq 5$ : Possibility of multicollinearity occurring
- $VIF < 3$ : Possibly no multicollinearity

### **3.6.3.2 R-square**

The R-square value describes the explanatory power of the independent variables for a dependent variable of the sample data set during the study (Hair et al., 2019). In terms of significance, although the meaning of  $R^2$  adjusted is the same as that of  $R^2$ , reflecting the model's goodness of fit, the R-square adjusted is slightly different. To be more precise, the R-square adjusted does not necessarily increase as the independent variables are added to the model. In contrast, the R-squared coefficient is a function that increases as the number of independent variables in the model increases, so adding more independent variables to the model will result in a higher R-squared. However, it has also been shown that the more variables an equation contain, the more feasible it is.

The R-square adjusted ranges from 0 to 1, however, reaching peak 1 is impossible. In addition, Hair et al. (2011, 2013),  $R^2$  values of 0.75, 0.50, and 0.25 can be considered significant, moderate, and weak respectively.

### **3.6.3.3 f-square**

Each independent variable in the SEM model will have an f-square ( $f^2$ ) index. Effect size is the coefficient to evaluate the influence of each independent variable on the dependent variable. To be more precise, the effect size  $f^2$  can compare the effects of the independent

variable on the dependent variable. Furthermore, f-square also provides thresholds for determining the strength of the variables.

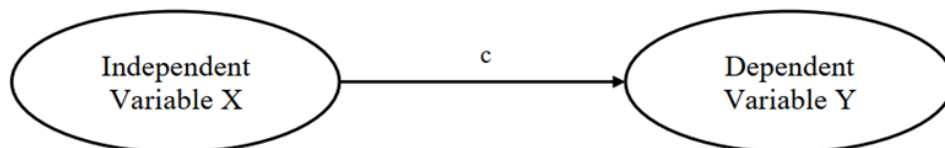
Cohen (1988) proposed the thresholds for  $f^2$  index to evaluate the importance of independent variables as below:

- $f^2 < 0.02$ : extremely small or has no impact
- $0.02 \leq f^2 < 0.15$ : small impact
- $0.15 \leq f^2 < 0.35$ : medium impact
- $f^2 \geq 0.35$ : high impact

### 3.6.4 Test of hypothesis

#### 3.6.4.1 Direct effects

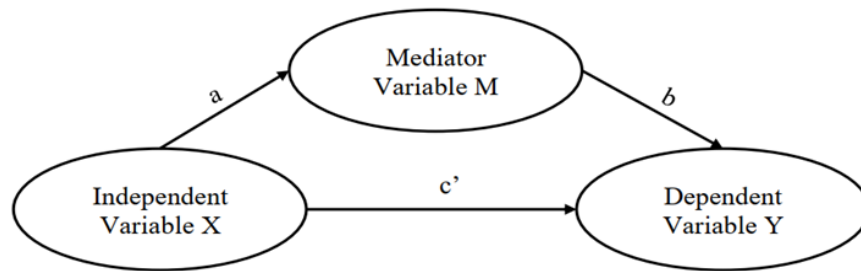
To test for direct effect, two conditions need to be considered: Beta coefficient and p-value. The base sample is the normalized effect coefficient of the original data. The p-value is the significance level of the t-test. Besides, the p-value is compared to the level of significance with comparison thresholds such as 0.05, 0.1 and common is usually 0.05.



*Figure 3. 4: Simple cause-effect relationship model*

#### 3.6.4.2 Mediating effects

In this part, a mediating effect is also known as an indirect effect, which is characterized by the involvement of a third variable that acts as an intermediary between the independent and dependent variables. To be more precise, in this essay, M is called the intermediate variable which mediates the relationship between the independent variable X and the dependent variable Y. According to Preacher et al. (2008), the main objective of the study. An intermediate study is to demonstrate that "Somehow, an independent variable (X) affects a dependent variable (Y) through one or more intermediate factors (M)"



*Figure 3. 5: General mediation model*

There are two types of mediating effects, including Full mediation & Partial mediation.

**Full mediation**

Full mediation is recommended in the case when the direct effect  $c'$  is insignificant. To be more precise, if independent variable X does not have a significant direct impact on dependent variable Y but it has a significant impact on mediator M, which also has a significant impact on response variable Y, this is known as a case of full mediation. It also means that the effect of X, whether positive or negative, is entirely absorbed by circumstance Y. This allows it to either totally pass through one effect or completely inhibit it in terms of another impact.

**Partial mediation**

As we mentioned above in Figure 3.5, the direct effect of the independent factor X on the dependent variable Y is called a direct effect, whereas, the effect of the independent variable X on the dependent variable Y through the third variable 'intermediate' is called the indirect effect (Datapott Analytics, 2019). More specifically, if the independent variable X has a significant direct effect on the dependent variable Y and it also has a significant effect on the mediator M, which has a significant effect on the response variable Y, then this is referred to as the case of partial mediation. In addition, adding an intermediate makes the direct effect smaller, since some of the effects of X on Y are being captured by the third variable "intermediate". Besides, an indirect effect can also be known as an Intervening, intermediary, mediating or surrogate effect.<sup>21</sup>

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<sup>21</sup> <https://datapott.com/understanding-mediation-full-mediation-and-partial-mediation/> [Accessed: 22 March 2023].



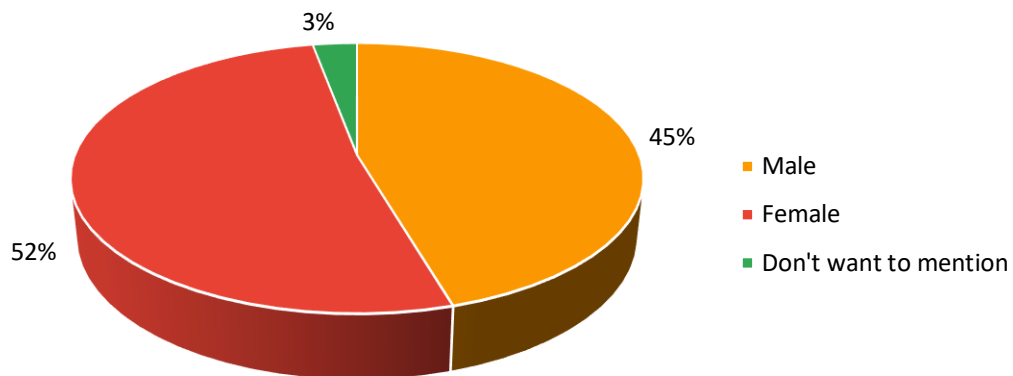
# CHAPTER 4: DATA ANALYSIS AND FINDINGS

## Introduction

This chapter describes the research context of the factors that affect customer intention to stay at the green hotel when traveling in Vietnam. It also analyzes the research response and the results of the PLS-SEM analysis. First, this chapter will conduct a descriptive analysis of the general information, includes demographic, data cleaning, and missing value. Then, in inferential analysis, PLS-SEM model evaluation consists of two steps: confirming the measuring model's reliability and validity and analyzing the sign and significance of structural relationships between constructs.

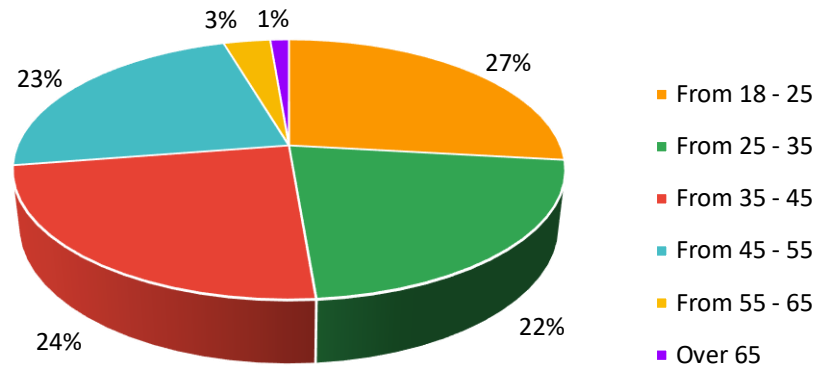
## 4.1 Survey analysis

### 4.1.1 Respondent profile



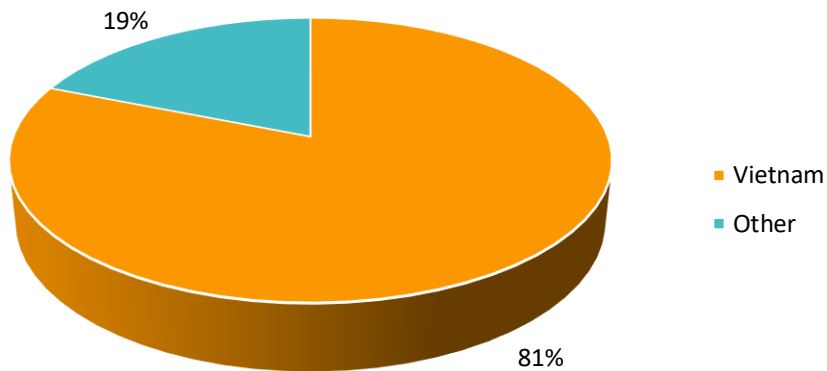
*Chart 4. 1: Gender of respondents*

In response to the question regarding the respondents' gender, the graph shows that female accounts for the highest proportion of 52%, the male proportion is 45%, and 3% do not want to mention their gender. There is not much of a distinction between males and females.



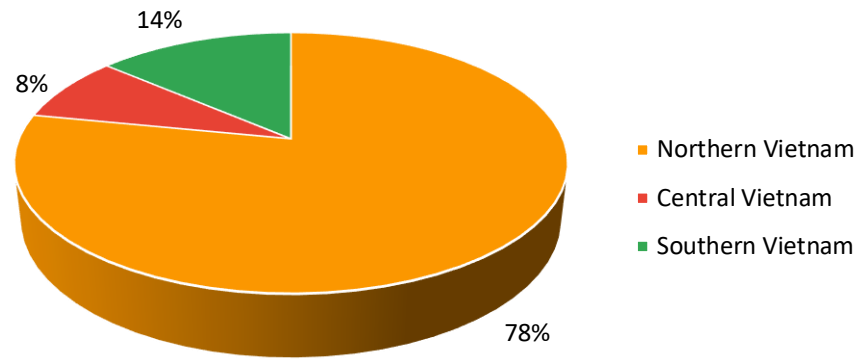
*Chart 4. 2: Age of respondents*

For the simplicity of sampling and the following analytic stages, the survey was only given to participants aged 18 years and older. The chart illustrates those respondents in the age group of 18 to 25 accounted for the majority with 27%; followed by the age group from 35 to 45 with 24% of respondents; 23% of answers are between the ages of 45 to 55; 22% of them are between the ages of 25 to 35. Finally, the remaining 4% of respondents are aged between 55 to 65 and over 65.



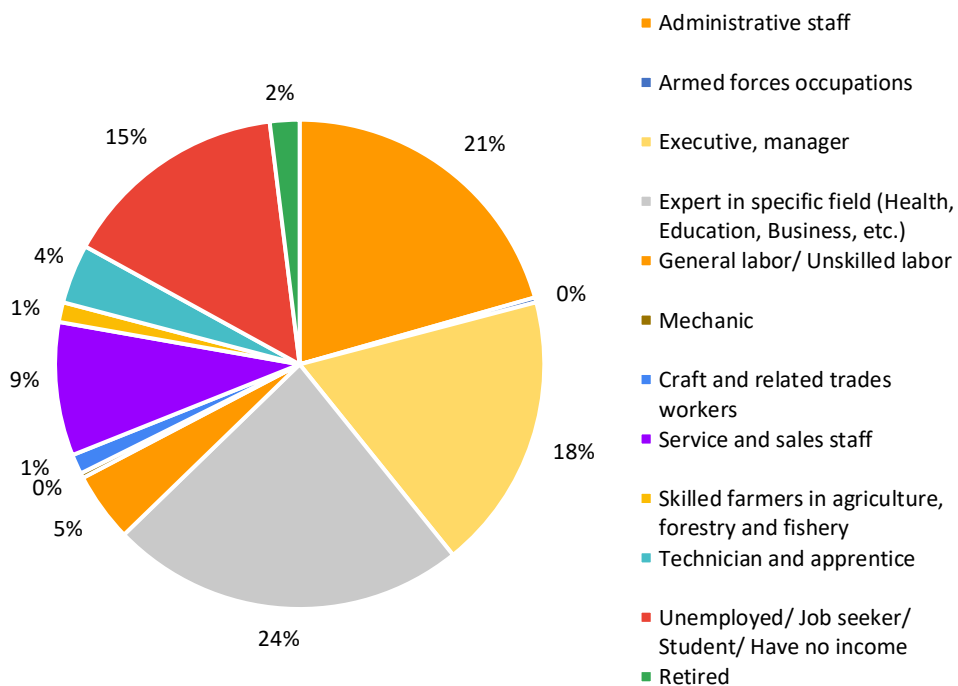
*Chart 4. 3: National respondents*

Based on the field of the study in Vietnam, the survey was only given to participants who are staying and working in Vietnam at the moment. The result indicates that 81% are Vietnamese, and the remaining 19% of the respondents are foreigners who have lived in Vietnam for over 3 months.



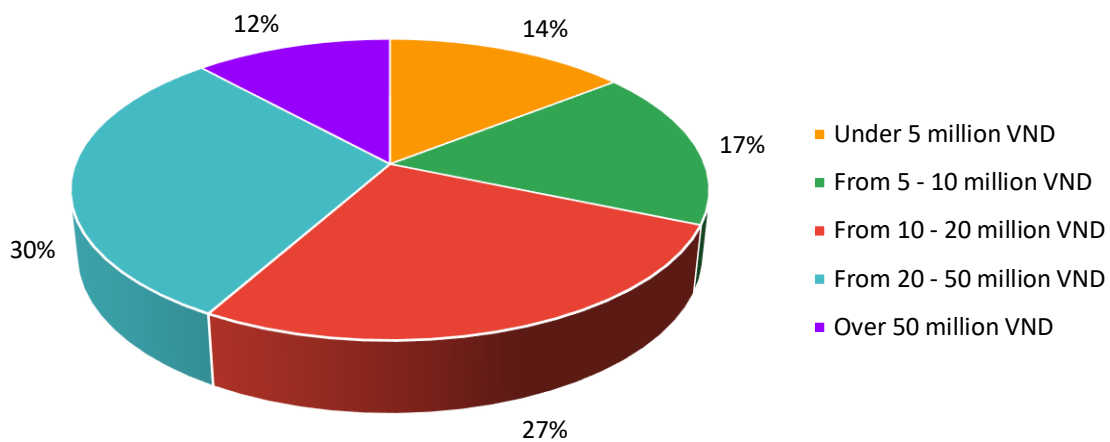
*Chart 4. 4: Regional of respondents*

Based on responses from total survey participants, 78% of the total participants come from the North, with the remaining 22% coming from the middle and southern regions of Vietnam.



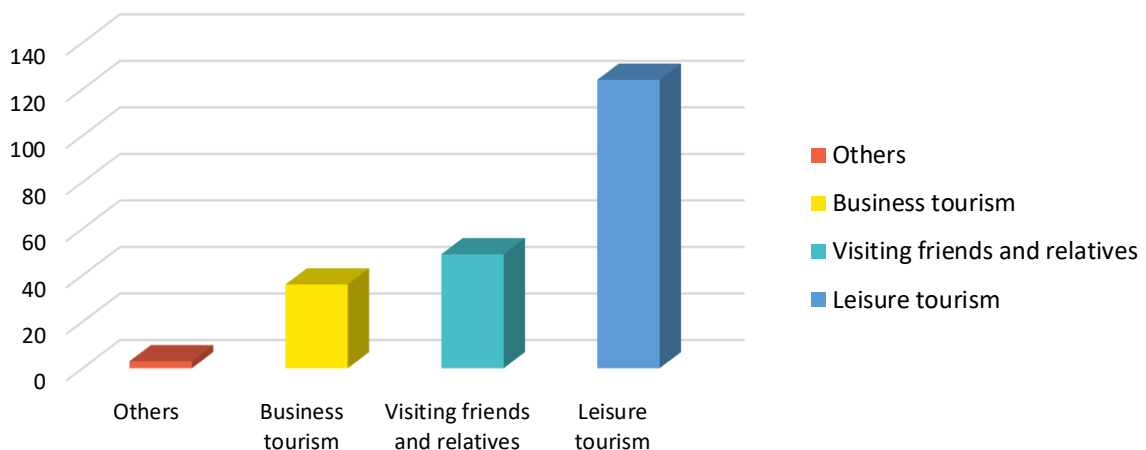
*Chart 4. 5: Job of respondents*

According to pie chart 4.3, the majority of respondents, roughly 63%, are experts, administrators, executives, and managers. Following there are 24% of respondents who were unemployed or had no income (15%), service and sales staff (9%). The last 13% of respondents work in the armed forces, general labor, mechanic, craft, and allied trades, as skilled farmers, technicians, or retired.



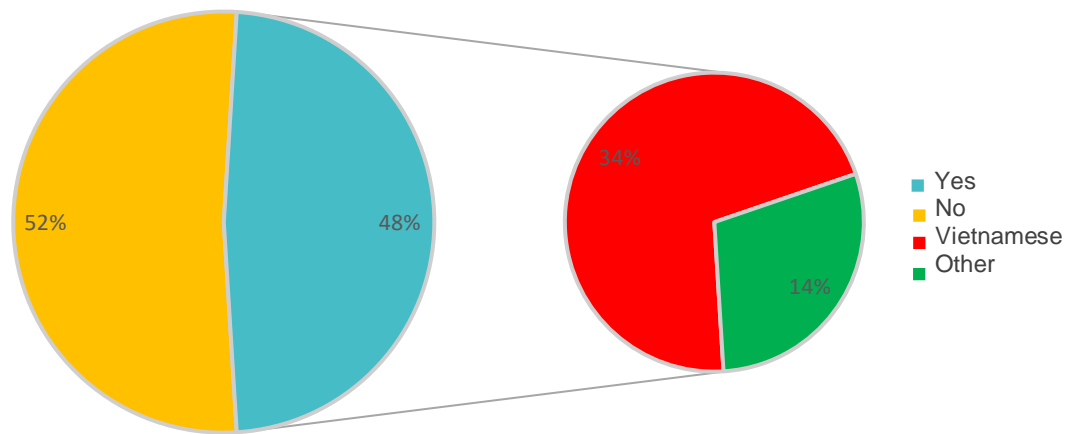
*Chart 4. 6: Total income of respondents*

30% respondents said that their total income was between 20 and 50 million VND. The next category, with an average income of between 10 and 20 million VND, represents 27%. The average income group, with a range of 5 to 10 million VND, has a proportion of 17%. The percentage for the group with income under 5 million VND is 14%. The group with an average income of over 50 million VND made up the last 12%.

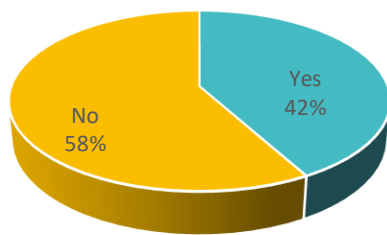


*Chart 4. 7: Traveling purposes of respondents*

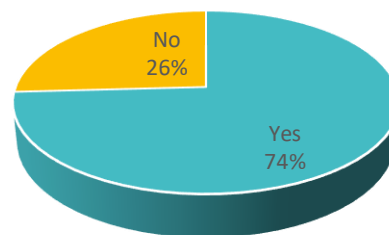
The table above shows the survey respondents' purpose for traveling in Vietnam. According to the obtained results, it can be seen that most of the respondents choose to travel for the purpose of leisure tourism (124 responses). The remaining are splinter groups who travel for the sake of business, visiting friends and family or for others purposes, respectively 36, 49, and 3 responses.



Vietnamese respondent's experience staying at green hotel in Vietnam

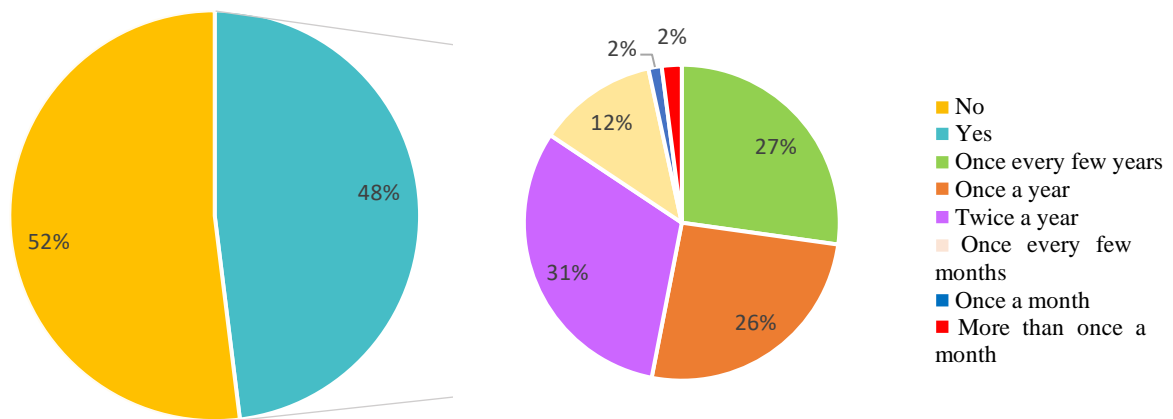


Foreigner respondent's experience staying at green hotel in Vietnam



*Chart 4. 8: Experience staying at the green hotel in Vietnam of respondents*

The pie chart describes in detail the respondent's experience staying at the green hotel in Vietnam over half of the total respondents have not had the experience of staying at a green hotel in their past trips. To be more precise, this figure of 48% includes 34% of Vietnamese and 14% of the number of foreigners in Vietnam who have experienced this model. Specifically, two small pie charts above give more detailed on the number of people who have stayed at green hotels in Vietnam. According to those pies, approximately half of 248 Vietnamese people choosing to stay at a green hotel as their destination. In contrast, although the number of foreigners is only a quarter of Vietnamese, the results show that up to 74% of them have ever stayed in a green hotel. Therefore, it can be seen that the possibility that foreigners have experienced the green hotel model is higher than that of Vietnamese.



*Chart 4. 9: Frequency of stay at the green hotel in Vietnam of respondents*

As stated above, there are only 48% of survey respondents have experienced the green hotel model before, and their stay frequency is relatively low which are Once every few years (27%), Once a year (26%), and Twice a year (31%). Remaining, just 16% of survey respondents rate themselves as regularly staying at green hotels. Thereby, it can be seen that people do not have much intention to experience the green model in hotels which leads to the low of choosing to stay at this type of accommodation.

#### 4.1.2 Descriptive statistics

Name	Missings	Mean	Scale min	Scale max	Standard deviation	Excess kurtosis	Skewness
EC1	0.000	4.222	1.000	5.000	0.834	0.801	-0.981
EC2	0.000	4.219	1.000	5.000	0.845	1.591	-1.186
EC3	0.000	4.010	1.000	5.000	0.978	0.108	-0.798
EC4	0.000	4.134	1.000	5.000	0.874	0.674	-0.914
GHK1	0.000	3.542	1.000	5.000	1.129	-0.436	-0.483
GHK2	0.000	3.493	1.000	5.000	1.150	-0.532	-0.451
GHK3	0.000	3.431	1.000	5.000	1.214	-0.784	-0.357
GT1	0.000	3.859	1.000	5.000	0.857	0.028	-0.507
GT2	0.000	3.833	1.000	5.000	0.849	0.300	-0.544
GT3	0.000	3.814	1.000	5.000	0.883	0.305	-0.601

GT4	0.000	3.843	1.000	5.000	0.968	-0.624	-0.421
GT5	0.000	3.899	1.000	5.000	0.953	-0.143	-0.593
PCE1	0.000	3.817	1.000	5.000	1.137	0.196	-0.908
PCE2	0.000	3.814	1.000	5.000	1.023	0.474	-0.871
PCE3	0.000	3.843	1.000	5.000	1.091	0.340	-0.898
CA1	0.000	4.082	1.000	5.000	0.842	0.122	-0.651
CA2	0.000	4.065	1.000	5.000	0.849	-0.003	-0.608
CA3	0.000	4.101	2.000	5.000	0.820	-0.647	-0.475
CA4	0.000	3.876	1.000	5.000	0.917	-0.404	-0.441
CA5	0.000	4.108	1.000	5.000	0.783	0.285	-0.644
CA6	0.000	4.085	1.000	5.000	0.816	-0.255	-0.520
CA7	0.000	4.154	1.000	5.000	0.816	0.794	-0.870
INTS1	0.000	4.065	1.000	5.000	0.865	0.080	-0.676
INTS2	0.000	3.948	1.000	5.000	0.917	0.156	-0.663
INTS3	0.000	4.003	1.000	5.000	0.902	0.640	-0.865

*Table 4. 1: Descriptive Statistics*

After aggregating 306 valid responses and performing descriptive analysis, the analysis results show that most of the average ratings of the comments are between 3 and 4. This proves that customers tend to agree with most of the determinants. The highest mean belongs to EC1 (I am extremely worried about the state of the world's environment and what it will mean for my future) with a mean equal to 4.222 which shows that tourists agreed with this determinant. Thereby, it can be seen that these determinants can significantly influence the intention to stay in a green hotel in Vietnam.

Moreover, the variables' standard deviation value is acceptable except for PCE and GHK is greater than 1. This figure demonstrates that there is a discrepancy in the respondents' knowledge about green hotels and their commitment to taking action to protect the environment, leading to the standard deviation having a significant dispersion and instability.

## 4.2 Measurement model

### 4.2.1 Outer loading

Outer loading (first time)						
Items	CA	EC	GHK	GT	INTS	PCE
CA1	0.844					
CA2	0.883					
CA3	0.796					
CA4	0.766					
CA5	0.891					
CA6	0.870					
CA7	0.857					
EC1		0.915				
EC2		0.694				
EC3		0.746				
EC4		0.742				
GHK1			0.892			
GHK2			0.971			
GHK3			0.886			
GT1				0.853		
GT2				0.885		
GT3				0.850		
GT4				0.869		
GT5				0.882		
INTS1					0.859	
INTS2					0.848	
INTS3					0.799	
PCE1						0.725
PCE2						0.792
PCE3						0.722
PCE4						0.012

*Table 4. 2: Outer Loadings the first time*

One can observe at Table 4.2 that EC2 (0.694) and PCE4 (0.012) could not adapt to the standard value of 0.708. As a result, the Outer loading needs to be conducted again without EC2 and PCE4. Nonetheless, the Construct reliability value of EC through Cronbach's alpha



is 0.863 and Composite reliability is 0.870 which remains reliable by reaching over 0.700, and the Outer loading of EC2 is approximately 0.708 is still reasonable. Thus, EC does not need to exclude it from the model.

The data was used once again, but the variable PCE4 was removed from the analysis, and the results were presented in the form of the table below. This time all items had met the critical standard following the rule the thumb.

<b>Outer loading (second time)</b>						
<b>Item</b>	<b>CA</b>	<b>EC</b>	<b>GHK</b>	<b>GT</b>	<b>INTS</b>	<b>PCE</b>
<b>CA1</b>	0.844					
<b>CA2</b>	0.883					
<b>CA3</b>	0.796					
<b>CA4</b>	0.766					
<b>CA5</b>	0.891					
<b>CA6</b>	0.870					
<b>CA7</b>	0.857					
<b>EC1</b>		0.915				
<b>EC2</b>		0.694				
<b>EC3</b>		0.746				
<b>EC4</b>		0.742				
<b>GHK1</b>			0.892			
<b>GHK2</b>			0.971			
<b>GHK3</b>			0.886			
<b>GT1</b>				0.853		
<b>GT2</b>				0.885		
<b>GT3</b>				0.850		
<b>GT4</b>				0.869		
<b>GT5</b>				0.882		
<b>INTS1</b>					0.859	
<b>INTS2</b>					0.848	
<b>INTS3</b>					0.799	
<b>PCE1</b>						0.725
<b>PCE2</b>						0.792
<b>PCE3</b>						0.722

*Table 4. 3: Outer Loadings the second time*

#### 4.2.2 Reliability and Convergence

<b>Construct reliability and validity</b>				
<b>Items</b>	<b>Cronbach's alpha</b>	<b>Composite reliability</b>	<b>Composite reliability</b>	<b>Average variance extracted</b>
<b>CA</b>	0.946	0.947	0.946	0.714
<b>EC</b>	0.863	0.870	0.859	0.606
<b>GHK</b>	0.940	0.943	0.941	0.841
<b>GT</b>	0.939	0.939	0.938	0.753
<b>INTS</b>	0.873	0.875	0.874	0.698
<b>PCE</b>	0.788	0.793	0.791	0.558

*Table 4. 4: Construct Reliability and Validity*

The six variables in question have a Cronbach's alpha is exceeding 0.700, indicating high internal consistency. The Composite reliability score for the components scale is also quite high which greater than 0.700 (Hair et al., 2017). Therefore, since these factors meet both criteria, they can be used in the research. With the AVE of all variables meeting the condition greater than 0.500, the scales have met the criteria to converge at the dependent variable.

#### 4.2.3 Discriminant Validity

<b>Heterotrait-Monotrait Ratio (HTMT)</b>						
<b>Items</b>	<b>CA</b>	<b>EC</b>	<b>GHK</b>	<b>GT</b>	<b>INTS</b>	<b>PCE</b>
<b>CA</b>						
<b>EC</b>	0.577					
<b>GHK</b>	0.364	0.405				
<b>GT</b>	0.672	0.564	0.557			
<b>INTS</b>	0.845	0.584	0.471	0.713		
<b>PCE</b>	0.688	0.551	0.293	0.736	0.668	

*Table 4. 5: Heterotrait-Monotrait Ratio (HTMT)*

It is apparent from Table 4.5 that the requirement of HTMT was met by all of the indices, with values are under 0.850 (Hair et al., 2017). This indicates that all of the variables are unique and not correlated to each other.

### 4.3 Structural model

#### 4.3.1 VIF

<b>Inner VIF Model</b>						
<b>Constructs</b>	<b>CA</b>	<b>EC</b>	<b>GHK</b>	<b>GT</b>	<b>INTS</b>	<b>PCE</b>
<b>CA</b>					2.293	
<b>EC</b>	1.440			1.199	1.744	
<b>GHK</b>				1.199	1.584	
<b>GT</b>					3.268	
<b>INTS</b>						
<b>PCE</b>	1.440				2.773	

*Table 4. 6: Collinearity Statistics*

Table 4.6 describes that most variables give VIF values are smaller than 3, indicating that multicollinearity may not occur between the independent variables (Hair et al., 2019). Besides, the VIF value between GT and INTS was recorded to touch the threshold of 3.268 in the range of 3 to 5. In this case, multicollinearity can occur, but the possibility of multicollinearity is not too high because this value is asymptotically close to 3 (Hair et al., 2019).

#### 4.3.2 R-square adjusted

<b>R-square</b>	
<b>Constructs</b>	<b>R-square Adjusted</b>
<b>INTS</b>	0.763

*Table 4. 7: R-square Adjusted (Coefficient of Determination)*

According to Table 4.7, the R-square adjusted of INTS is 0.763, which means that the independent variables explain 76.3% of the variation of the dependent variable.

### 4.3.3 f-square

f-square						
Construct	CA	EC	GHK	GT	INTS	PCE
CA					0.741	
EC	0.125			0.254	0.010	
GHK				0.231	0.037	
GT					0.030	
INTS						
PCE	0.409				0.004	

Table 4. 8: Effect size (f-square)

According to table 4.8, it can be clearly seen that the two variables GHK and GT have a small impact on the dependent variable ( $f^2$  is within 0.020 and 0.150). Besides, the two independent variables EC and PCE have very little or no impact on INTS with the result of f-square being less than 0.020. In contrast, the intermediate variable CA has a quite significant effect on INTS with the result of 0.741 which greater than the threshold of 0.350 (Cohen, 1988). It found similarity with the Beta coefficient index ( $\beta$ ) when two hypotheses were rejected.

### 4.3.4 Hypothesis testing

	$\beta$	Standard deviation	T-statistics	P values
CA $\rightarrow$ INTS	0.557	0.067	8.323	0.000
EC $\rightarrow$ CA	0.322	0.061	5.292	0.000
EC $\rightarrow$ GT	0.371	0.056	6.614	0.000
EC $\rightarrow$ INTS	0.072	0.056	1.271	0.204
GHK $\rightarrow$ GT	0.387	0.057	6.818	0.000
GHK $\rightarrow$ INTS	0.111	0.047	2.381	0.017
GT $\rightarrow$ INTS	0.162	0.073	2.212	0.027
PCE $\rightarrow$ CA	0.447	0.059	7.572	0.000
PCE $\rightarrow$ INTS	0.059	0.071	0.829	0.407

Table 4. 9: Path Coefficients (Direct effects)

According to the results showed in Table 4.9, without EC and PCE having no impact on INTS, the p-values of other direct effects are all less than 0.050 (Hair et al., 2017), so we reject H2 and H6. Remaining these others interactions are all statistically significant. Moreover, CA and GT have the strongest impact on INTS.

	$\beta$	Standard deviation	T-statistics	P values	Result
<b>EC → GT → INTS</b>	0.060	0.028	2.148	0.032	Full mediation
<b>GHK → GT → INTS</b>	0.063	0.031	2.032	0.042	Partial mediation
<b>EC → CA → INTS</b>	0.179	0.037	4.802	0.000	Full mediation
<b>PCE → CA → INTS</b>	0.249	0.049	5.066	0.000	Full mediation

*Table 4. 10: Specific indirect effects*

According to the result of Table 4.10, it can be seen that the p-value of all specific indirect effects is statistically significant (less than 0.050). PCE, GHK, and EC all have an indirect relationship with INTS. Moreover, EC and GHK have the most positive impact on INTS through GT.

	$\beta$	Standard deviation	T statistics	P values
<b>EC → INTS</b>	0.239	0.044	5.388	0.000
<b>GHK → INTS</b>	0.063	0.031	2.032	0.042
<b>PCE → INTS</b>	0.249	0.049	5.066	0.000

*Table 4. 11: Total indirect effects*

According to the result of Table 4.11, it can be seen that the p-value of all indirect effects is statistically significant (less than 0.050). Of the three interactions, the mediating effects of GHK has the less positive impact on INTS, and the remaining variables have the same positive impact on INTS.

### 4.3.5 Hypotheses conclusion

According to the consequences of the tables above, the results of testing hypotheses are recapitulated in the Table 4.12 below:

Hypotheses	Content	$\beta$	P-value	Result $\beta$
H1a	Green hotel knowledge is significantly associated with Intention to stay at the green hotel	0.111	0.017	Supported
H1b	Green hotel knowledge is significantly associated with Green trust	0.387	0.000	Supported
H2a	Environmental concern is significantly associated with Intention to stay at the green hotel	0.072	0.204	Rejected
H2b	Environmental concern is significantly associated with Green trust	0.371	0.000	Supported
H2c	Environmental concern is significantly associated with Customer attitude	0.322	0.000	Supported
H3	Green trust is significantly associated with Intention to stay at the green hotel	0.162	0.027	Supported
H4	Green trust mediates the relationship between Green hotel knowledge and Intention to stay at the green hotel	0.063	0.042	Supported
H5	Green trust mediates the relationship between Environmental concerns and Intention to stay at the green hotel	0.060	0.032	Supported
H6a	Perceived customer effectiveness is significantly associated with Intention to stay at the green hotel	0.059	0.407	Rejected

H6b	Perceived customer effectiveness is significantly associated with Customer attitude	0.447	0.000	Supported
H7	Customer attitude is significantly associated with Intention to stay at the green hotel	0.557	0.000	Supported
H8	Customer attitude mediates the relationship between Environmental concerns and Intention to stay at the green hotel	0.179	0.000	Supported
H9	Customer attitude mediates the relationship between Perceived customer effectiveness and Intention to stay at the green hotel	0.249	0.000	Supported

Table 4. 12: Hypotheses conclusion

Diagram SEM

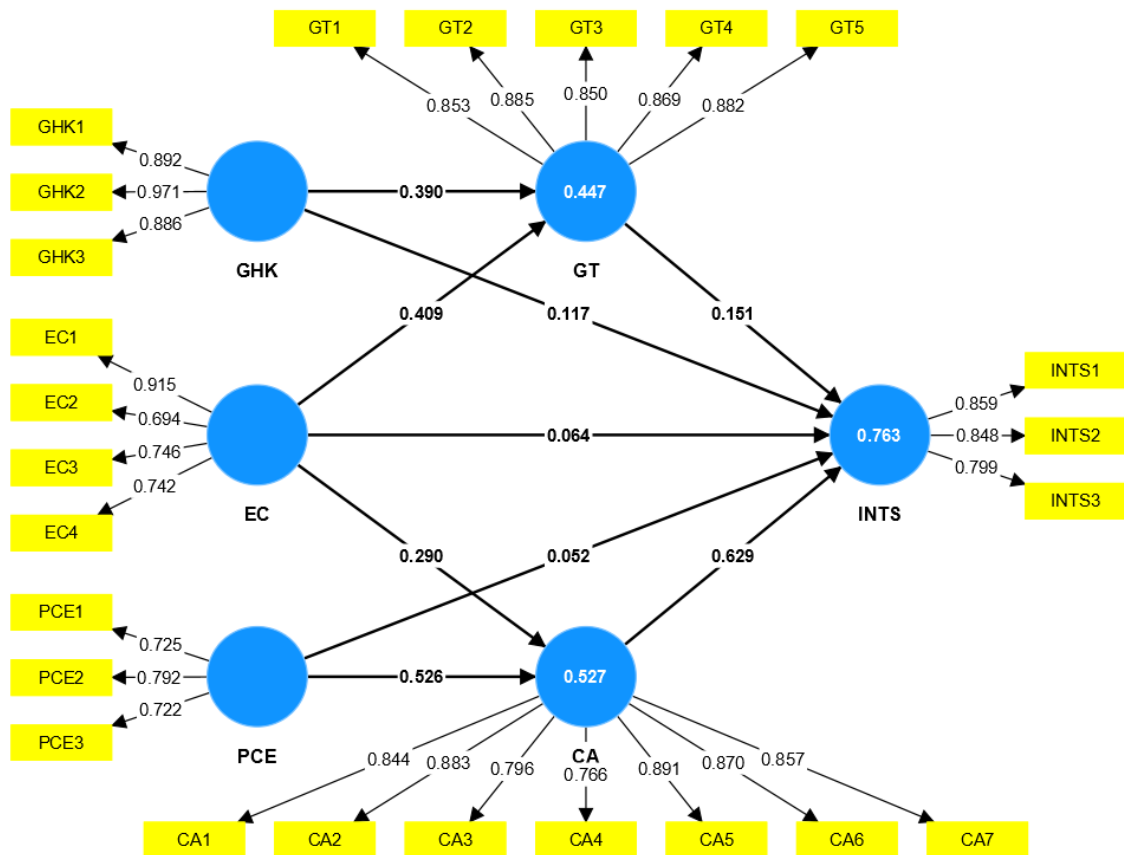


Figure 4. 1: Smart-PLS included Outer loadings, Beta Coefficient ( $\beta$ ) and R<sup>2</sup> Adjusted

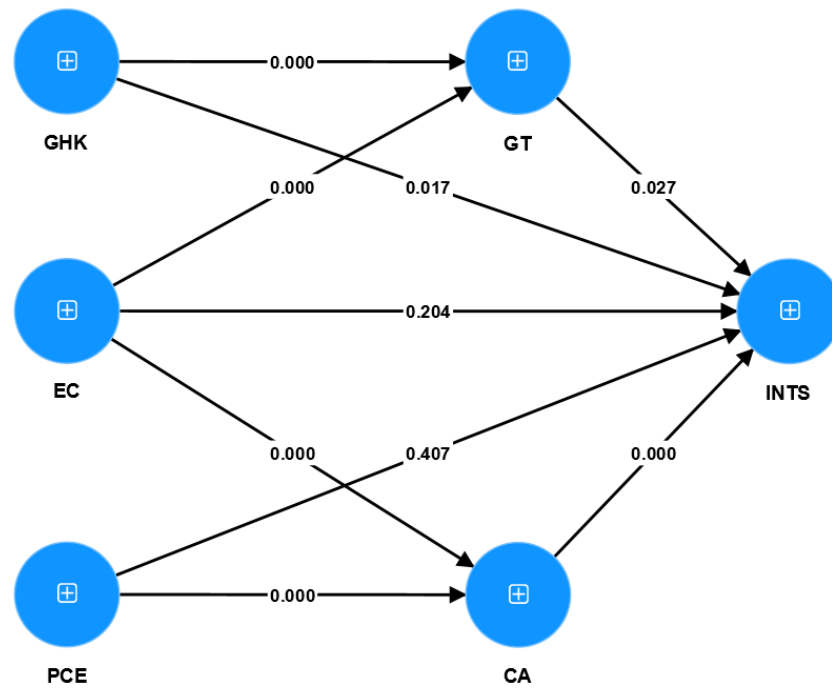


Figure 4. 2: Smart-PLS included p-values

## 4.4 Discussion

### 4.4.1 The role of Green hotel knowledge on Intention to stay at the green hotel

#### 4.4.1.1 The direct effect of Green hotel knowledge on the Intention to stay at the green hotel

The empirical analysis from this study shows that green hotel knowledge has a significant positive impact on customer intention to visit with  $\beta = 0.111$  and p-value = 0.017. The result appears to validate Sultana et al. (2022), and Nimri et al. (2020) in determining the significance of green hotel knowledge when choosing green hotels. Chen and Peng (2019) claimed that researchers are increasingly interested in the role of knowledge in influencing customer behavior. Specifically, Nimri et al. (2020) affirmed that green hotel knowledge emerged as a strong predictor of customers' intention. The same idea as Nimri et al. (2020); Sultana et al. (2022) pointed out that green knowledge of customers has a direct relationship and can affect the decision of customers' green hotel visit intention. In addition, Jiang and Gao (2019) supported that mastering green hotel knowledge has an impact on promoting the intention of hotel guests by turning knowledge into practical action. Therefore, based on the experimental results of this essay and previous researchers' consensus, knowledge about green hotels is an important and reliable premise for visiting green hotels.



#### 4.4.1.2 The indirect effect of Green hotel knowledge on the Intention to stay at the green hotel

GHK → GT → INTS: Partial mediation ( $\beta = 0.063$ ; p-value = 0.042)

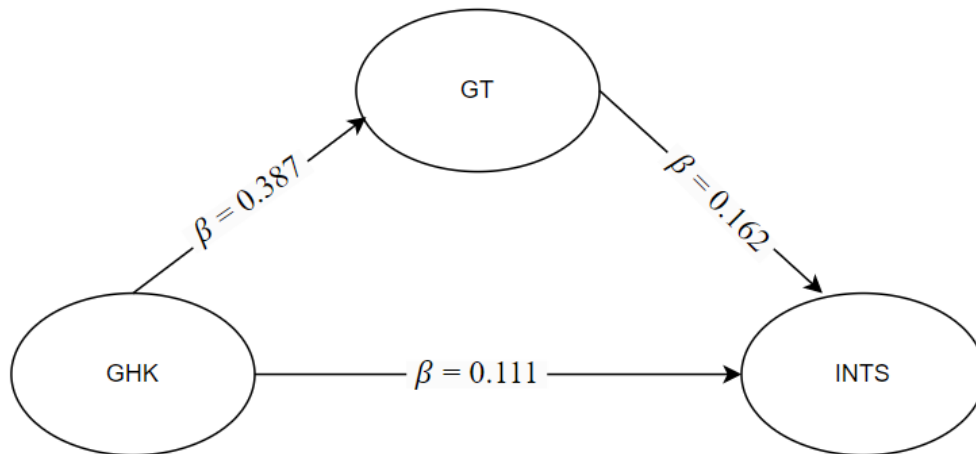


Figure 4. 3: Mediation Model of Variables GHK, GT, INTS

The results of Table 4.10 showed that the indirect effects of green hotel knowledge on intention to stay through green trust have p-values = 0.042,  $\beta = 0.063$ , indicating this relationship is partial mediation.

To supplement the above relationship, several authors such as Balaji et al. 2019; Gil and Jacob 2018 shared the same idea that customers' green hotel knowledge can enhance their trust in green products or services. Our results also presented the fact that the green knowledge of customers has a direct relationship and can affect their faith in green products and services. In addition, this result is consistent with the findings of previous studies by Sultana et al. (2022), Choi et al. (2015), and Hashish et al. (2022), researchers have highlighted that green trust has a favorable impact on customers' behavioral intentions, which has indicated a favorable correlation between behavioral intentions and green trust.

It's worth mentioning that the relationship between green hotel knowledge and intention to stay at a green hotel has a mediator role played by green trust, which has not attracted much attention from researchers. Sultana et al. (2022) confirmed that customers' green knowledge has an indirect relationship with customer staying intention when going through the green trust, which is completely identical to our expectations. This means that as people become more familiar with a particular place, particularly a green hotel, their willingness to stay at such hotels increases. Moreover, the intention to stay at a green hotel will be stronger when

customers trust that the hotel attributes contribute to minimizing harm to the surrounding environment. To complement the above, Goh and Balaji (2016) and Gil and Jacob (2018) emphasized that customers' actual behavior may be severely impacted by their lack of trust. In addition, Goh and Balaji (2016) described that if customers are not confident in green hotels, they will be questioned about their performance, which can be the chief obstacle to their intention to stay. In conclusion, customers who have green hotel knowledge are more likely to stay at green hotels especially if they have faith in this business model.

#### **4.4.2 The role of Environmental concern on Intention to stay at the green hotel**

##### **4.4.2.1 The direct effect of Environmental concern on the Intention to stay at the green hotel**

The p-value of 0.204 ( $> 0.05$ ) in Table 4.9 shows environmental concern has no significant impact on the intention to stay at green hotels. It is entirely out of our expectation that the impacts of environmental concerns on customers' visiting intention are negligible. However, this experimental result is consistent with the views of previous studies (Jiang and Kim, 2015; Sultana et al., 2022). To be more precise, Jiang and Kim (2015) stated that there was no evidence to confirm the relationship between environmental concern and the intention to stay at a green hotel among Korean residents. Sultana (2022) also concluded that environmental concerns play an insignificant role in influencing the green hotel decision in Bangladesh.

In stark contrast to our results, many studies have reached the opposite conclusion such as Demir et al. (2021), and Wang et al. (2018). Specifically, based on a survey conducted in north Cyprus, Demir et al. (2021) indicated that an environmental concern was a solid factor in forecasting intention to visit. On the other hand, Wang et al. (2018) confirmed environmental concerns' positive effect on intention when surveying in China; however, this relationship is relatively limited and insignificant.

It is easily recognized that our finding contradicts early research that if customers believe their green approach will produce positive results, they are more likely to engage in the behavior of certain factors that may lead to them choosing green hotels (Demir et al., 2021; Jiang and Kim, 2015). To explain this contradiction, Schultz and Zelezny (1999) demonstrated that citizens' environmental attitudes significantly differ across countries as each country has a different level of awareness toward environmental risks. Huddy (2001) also claimed although social identity theory has stated that customers care about the

environment in choosing green products and services; however, this has limited its application since it does not recognize the gaps in social identity due to its complex history and culture. Besides, some researchers pointed out that only a small part of environmentally conscious customers use green services in general and stay at green hotels in particular because of the high cost and inconvenience (Maibach, 1993; Roberts, 1996).

To sum up what has been started so far, although Kim and Choi (2005) emphasized the compelling link between people's green purchasing decisions and their environmental concerns, the proofs mentioned above showed a more objective view of differences in culture, history and income when considering customers' intention to stay in a green hotel. Therefore, relying on our experimental results in Vietnam with 306 valid responses, the role of environmental concern in predicting the intention of consumers to visit green hotels is limited.

#### 4.4.2.2 The indirect effect of Environmental concern on the Intention to stay at the green hotel through Green trust

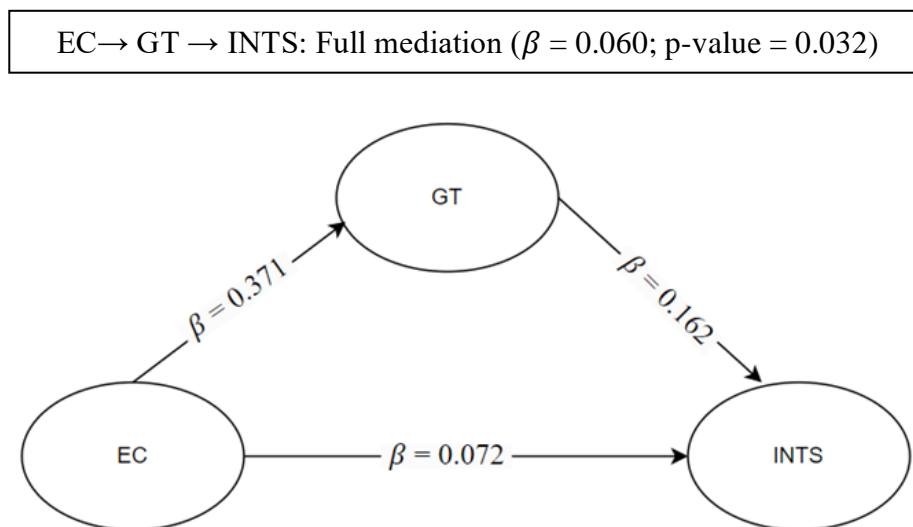


Figure 4. 4: Mediation Model of Variables EC, GT, INTS

The empirical findings from this research identify that green trust mediates the relationship between environmental concern and customers' intention to stay ( $\beta = 0.060$ , p-value = 0.032); therefore, this link is called a full mediation.

The experimental results reveal that environmental concerns have a direct influence on customers' green trust. Our study is consistent with the findings of several other authors (Wang et al., 2018; Nimri et al., 2020; Sultana et al., 2022) who also observed that customers' environmental concerns enhance their trust in green products and services. The results

emphasize the significance of environmental awareness and adequate knowledge as important precursors in establishing trust in green products. Furthermore, since we have already endorsed this association, green trust has a positive influence on customers' behavioral intentions. This suggests a positive correlation between behavioral intentions and green trust.

To put it briefly, customers' intention to stay is not only impacted by their knowledge or concern about the environmental matter but also influenced by how much they evaluate acting for the environment. This is demonstrated by the findings that both green hotel knowledge and environmental concern have a stronger mediation effect on the Intention to stay when affected by green trust. Hence, similar to our survey results, the study of Sultana et al. (2022) also pointed out that to investigate the relationship between customers' environmental concerns and their intention to stay at green hotels, it is necessary to go through the impact of green trust. In conclusion, although there is no direct correlation between environmental concern and the intention to stay, customers' intention to stay in a green hotel will be greatly influenced by green trust.

#### 4.4.2.3 The indirect effect of Environmental concern on the Intention to stay at the green hotel through Customer attitude

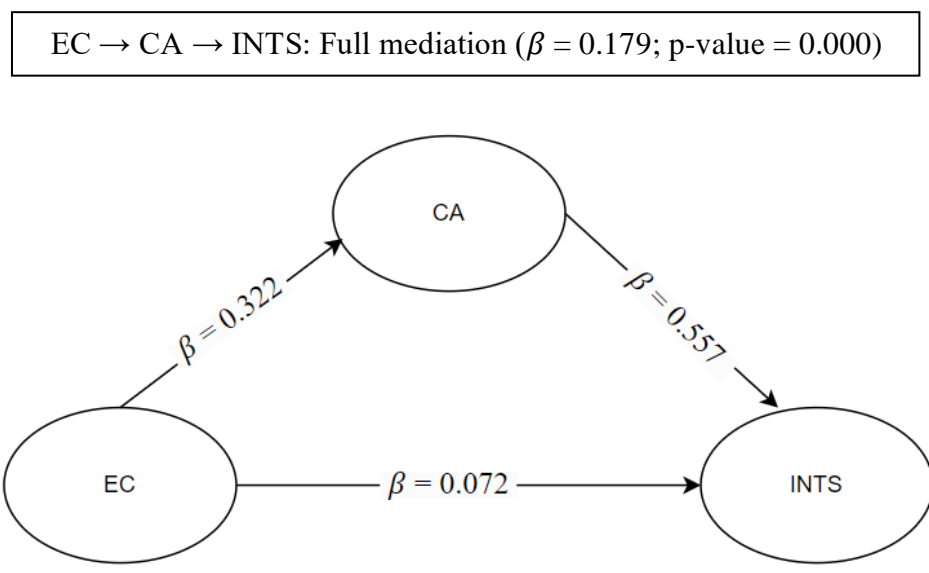


Figure 4. 5: Mediation Model of Variables EC, CA, INTS

The relationship between environmental concern and customers' intention to stay is mediated by customer attitude is verified in Table 4.10 with a significant  $\beta = 0.179$  and p-value = 0.000, which is called full mediation. The findings of this study provide new insights into the

relationship between environmental concern, customer attitude, and their intention to stay at a green hotel.

Firstly, regarding the direct effect between environmental concern and customer attitude, our research viewpoint is consistent with the findings of previous studies that are specifically concerned about the environment and represent the general understanding and orientation of any individual toward the protection of nature (Chen et al., 2014; Wang et al., 2018). To be more precise, these researchers believed that an increase in environmental concern could directly lead to the held attitude to preserve the environment better, which can build the intention to stay in a green hotel.

Secondly, our research is also consistent with the findings by Suki et al. (2015) and Manaktola and Jauhari (2007) when examining the connection between customer attitude and intention to stay. These studies have demonstrated that customers are increasingly inclined to stay in hotels prioritizing sustainability and environmental responsibility which leads customers to choose hotels that align with their values and beliefs.

Lastly, as we had mentioned above, our research has a new insight that has another point of view from previous experimental studies such as Agag and Colmekcioglu (2020), Chen and Tung (2014), and Jauhari and Manaktola (2007) which only showed a direct link between these factors, our research findings indicate that the customers' intention to stay at a green hotel is not truly dependent on their environmental concerns, it needs to be based on their attitude towards staying at a green hotel. To recap, these results suggest that the impact of environmental concern on intention to stay may be more complex than previously thought and will be influenced by other factors such as customer attitude. This underscores the importance of creating a positive attitude towards green hotels and its services to enhance the likelihood of customer retention and loyalty.

#### **4.4.3 The role of Perceived customer effectiveness on Intention to stay at the green hotel**

##### **4.4.3.1 The direct effect of Perceived customer effectiveness on the Intention to stay at the green hotel**

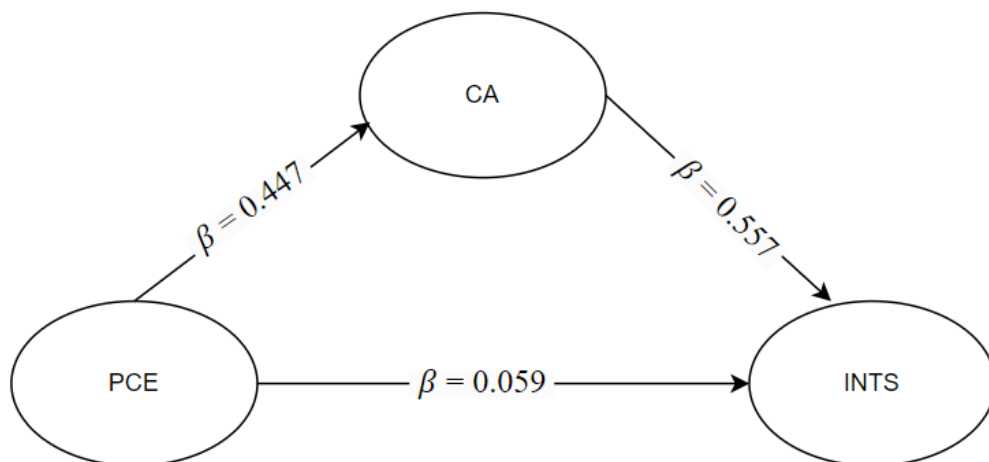
The hypothesis testing result demonstrates that perceived customer effectiveness has no direct influence on customers' intention to stay at a green hotel, with  $\beta = 0.059$  and  $p\text{-value} = 0.407$  ( $> 0.05$ ). Contrary to what we anticipated, no evidence to confirm the correlation between

perceived customer effectiveness and customer staying intention stay. Our experimental results with 306 clean samples contradict to previous studies such as Kim and Choi, (2005); Yan and Chai, (2021), examining the relationship between perceived customer effectiveness and consumer behavior. These researches indicated the effect of an individual’s belief in their environmental action on their intention to stay at a green hotel is favorable.

Following the response gathering for the hypothesis testing, Chart 4.3 reveals that 81% of the total respondents were Vietnamese, making up the majority of the sample. This figure shows how our research's respondent results are contrary to the outcomes of prior research such as Wang et al. (2018). The characteristic of our findings also demonstrates that customers' beliefs of their ability to impact the environment positively are not significant to indicate that they would choose to stay at a green hotel. Consequently, there is an inadequate role for perceived customer effectiveness in anticipating guests' intentions to stay in green hotels.

**4.4.3.2 The indirect effect of Perceived customer effectiveness on the Intention to stay at the green hotel through Customer attitude**

PCE → CA → INTS: Full mediation ( $\beta = 0.249$ ; p-value = 0.000)



*Figure 4. 6: Mediation Model of Variables PCE, CA, INTS*

The findings of this study provide new insights into how perceived customer effectiveness, customer attitude, and the intention to stay at a green hotel are linked. This finding is consistent with previous studies by Wang et al. (2018) and Yan and Chai (2021), which found a significant association between perceived customer effectiveness and customer attitude. These studies suggest that if consumers believe that staying at a green hotel can have a

positive environmental impact, they are more likely to alter their traditional behaviors and choose a green hotel. Additionally, our study's results demonstrate a strong direct effect on customer attitude, as noted earlier.

In contrast to previous studies conducted by Wang et al. (2018) and Kim and Han (2010), which examined the direct effects of perceived customer effectiveness and intention to stay. Moreover, our study has explored the mediating role of customer attitude in this relationship ( $\beta = 0.249$ ;  $p\text{-value} = 0.000$ ). Although our findings did not reveal a direct association between perceived customer effectiveness and intention to stay, the mediating effect of customer attitude provided a reliable result. Our research, which collected data from 306 valid respondents in Vietnam, suggests that the relationship between perceived customer effectiveness and intention to stay may be more complex than previous studies have suggested, and may be influenced by various factors, particularly customer attitudes. As a result, we support the notion that the intermediate role of customer attitude in the relationship between perceived customer effectiveness and intention to stay is accepted.

## CHAPTER 5: CONCLUSIONS AND RECOMMENDATION

### 5.1 Summary of findings – answer the research question

#### **What are the factors determining customers' thinking about staying at the green hotel?**

This study sheds light on the factors influencing customers' intention to stay at a green hotel in Vietnam. It demonstrates that customer attitude, green trust, green hotel knowledge, environmental concern, and perceived customer effectiveness are the five vital factors that affect customers' intention to stay at green hotel. Despite being a mediator variable, customer attitude is the strongest factor in predicting customers' intention to stay, with the  $\beta = 0.557$ . Followed by green trust factor with  $\beta = 0.162$ , which directly affects customer's intention to stay at green hotel. This indicates that customers' positive attitude towards green hotels and their trust in their attributes are two crucial factors in their decision-making process while choosing a green hotel.

Even though there is a distinction between beta coefficients of green hotel knowledge's indirect and direct path (0.063; 0.111), which allow the relationship toward customer intention to stay at green hotel become more significant.

Although in our case, environmental concern and perceived customer effectiveness has no direct effect toward customers' intention to stay at green hotel, the indirect path of these factors has shown significant impacts on customers' staying intention, with  $\beta$  of 0.239 and 0.249 respectively. Thus, customers' environmental consciousness and their perceived effectiveness level is insufficient for them to choose green hotel, hoteliers need to cultivate a positive attitude and establish trust in green hotel to make it become their traveling destination.

Overall, this study highlights the importance of understanding factors determining customers' intention to stay at green hotels in Vietnam. Therefore, hoteliers and policymakers should consider these findings to design effective strategies that promote adapting green practices in the hospitality industry.



## **5.2 Implications**

### **5.2.1 Theoretical implications**

In this research, we aim to contribute new insight to the existing literature on customers' intention to stay at green hotels by investigating the mediating effects of customer attitude on the correlation of environmental concern, perceived customer effectiveness, and intention to stay at a green hotel. This study expanded the theory from prior researches (Wang et al., 2018; Wang, 2020; Han and Yoon, 2015; Nimri et al., 2020; D'Souza et al., 2020) in the process of studying on customers' staying intention at the green hotel.

Previous studies have focused on the direct impact of environmental concern and perceived customer effectiveness on customers' staying intention at green hotel (Han and Yoon, 2020; Nimri et al., 2020). However, our research indicates that these factors have no direct influence on customers' staying intention, instead, customer attitude will play a significant mediating role. Our findings demonstrate that customers who are aware of and concerned about the environmental impact of hotels may not be motivated enough to stay at a green hotel unless they have a positive attitude.

### **5.2.2 Managerial implications**

The findings of this research also provide several practical implications for the management of green hotels. Considering the positive effect of customers' attitude and green trust on customers' staying intentions, managers can develop more effective marketing strategies to attract potential guests. This research suggests that hotel managers should focus on enhancing customers' knowledge, raising awareness of green hotel practices, and promoting a sense of trust in their environmental performance.

## **5.3 Recommendations**

### **5.3.1 Focusing on improving Customer's knowledge about Green hotel in Vietnam**

According to Table 4.1, the standard deviation value of green hotel knowledge is greater than 1 (from 1.129 to 1.214). It means that green hotel knowledge has a large distribution of responses, or the respondents have considerable differences in customers' green hotel knowledge. The reason for this finding comes from the lack of consistency in using certificates for green hotels, which confuses customers about their insight about green hotels.

To solve this problem, the government and relevant departments need to set a series of standards for green hotel certifications in Vietnam by synthesizing the specific elements of the hospitality industry in Vietnam and learning the essentials available from the standards of green hotels in the world. From there, the hotel operator and manager will have a unified standard to build their hotel based on a green model and customers are also provided with the correct knowledge about green hotels to identify and choose to stay at a green hotel easily.

Besides, the research also found that green hotel knowledge is one of the chief factors that impacted the customers' intention to stay at green hotels. Education is the most vital factor in improving knowledge about green hotels for people. Education must be continuous, consistent, and start early to enable the younger generation and the rest to have complete environmental knowledge. They can understand how the environment is being affected and how it can be protected. Moreover, to raise awareness of sustainability and environmental protection among customers, hoteliers might take the initiative to display educational posters of their green hotel rooms and attributes. Therefore, the higher the level of environmental knowledge customers have, the more likely they will form green hotels staying intention.

Although the intermediate  $\beta$  between GHK, GT, and INTS is not very high (0.063). However, the relation between  $\text{GHK} \rightarrow \text{GT}$  and  $\text{GT} \rightarrow \text{INTS}$  has a significant  $\beta$  value (0.387 and 0.162). It means that green hotel knowledge has a huge impact on customers' trust in green hotels, and green trust significantly influences the intention to stay. Thus, to improve the customer's intention to stay in a green hotel, the hotel manager needs to start by consolidating and improving the customer's green hotel knowledge to gain the customer's trust in this model. To further develop this relationship, hotel managers first need to be properly aware that green knowledge and beliefs contribute to choosing to stay at a green hotel. Therefore, developing green marketing strategies is needed to attract customers to use services at the hotel. These campaigns aim to raise awareness to let guests know the positive impact they can have on the environment by staying at a green hotel.

Moreover, with the goal of promoting customers' intention to stay at a green hotel during their trip, hotel managers must employ the correct information through honesty and transparency in those campaigns and green practices. Marketing campaigns must provide customers with the right images, information, and data about the green activities that the hotel is implementing. This allows customers to believe in the green hotel's commitment to environmental responsibility. Through the implementation of these advertising campaigns, marketers should

emphasize the importance of protecting the environment, as this leads consumers to believe that they will fulfill their environmental obligations by supporting green hotels.

In short, providing transparent and reliable information and standards or including environmental protection in education will allow people, especially customers, to gain more knowledge about green hotels and feel confident in using this kind of service. This trust can also help maintain good customer relationships and acquire new customers in the long term.

### **5.3.2 Focusing on improving Environmental concern in Vietnam**

Based on the experimental results in Table 4.12, although the direct correlation between EC and INTS is not supported, this result is accepted when considering this relationship through the intermediate variables (green trust and customer attitude). To be more precise, the mediate relationship  $EC \rightarrow CA \rightarrow INTS$  and  $EC \rightarrow GT \rightarrow INTS$  recorded that  $\beta$  of 0.179 and 0.060 respectively were positive and significant. Thereby, it can be seen that the individual's concern about the environment strongly reinforces their intention to stay in a green hotel when considering specific beliefs and attitudes. Thus, the findings of this research also provide several practical implications for government and the management of green hotels.

It can be seen that the role of the government in regulating environmental protection behaviors in general and the intention to use green services, in particular, is essential. In order to raise citizen concern about environmental issues, the government should encourage them to respond to public communication campaigns such as "Clean up the world" and "Earth Hour". Moreover, it is also necessary for the government and related departments to be transparent about the hospitality industry's impact on the environment through press releases or news. Thereby, these government interventions will allow people to recognize the negative effects the environment is facing, concurrently, raising awareness and attitudes about the importance of using specific green services rather than green hotels' staying intention.

On the other hand, hotel managers also play an important role in strengthening customers' trust in green hotels. The hotel manager should launch green marketing campaigns to create awareness of their green operations and strengthen guests' environmental values by highlighting their environmental practices to guests through the in-hotel or in-room information displays, hotel website, and other communication channels, such as social media. Moreover, green hotels should hang posters encouraging environmental protection from the smallest actions such as "turn off the faucet when not in use" or "turn off the lights when not

in use". In addition, customers should also be informed of the amount of electricity and water they have saved while staying at a green hotel, so they can realize how their daily behavior affects the environment. Simultaneously, the housekeeping department should also place reminders to inspire customers about their responsibility and obligation to protect the environment in lieu of only caring about their personal benefit.

By incorporating green marketing initiatives as an integral part of the overall business strategy, a hotel can encourage faith in green service consumers and engender a feeling of congruence between these customers and its brand image. As a result, this achieved green trust helps bond customer relationships and attract new customers in the long run concurrently.

### **5.3.3 Focusing on improving Perceived customer effectiveness about Green hotel in Vietnam**

Table 4.1 has stated that the standard deviation value of PCE is above 1 (from 1.023 to 1.137). This indicates that perceived customer effectiveness has a large dispersion in the variables, which points out that there are dissimilarities in guests' beliefs about whether their actions positively impact the environment. Considering the positive impact of perceived customer effectiveness on intention to stay through the intermediate variable customer attitude as has been shown in Table 4.12 above, green hotel managers should take active measures to increase consumers' perceptions of effectiveness.

For instance, the hotel can show consumers what resources (such as electricity and water) can be saved and how much carbon emissions can be reduced when staying at green hotels (Miao and Wei, 2013). Green hotels can display the sign of environmental protection in the bathroom and let consumers realize how their daily behavior influences the environment. Some reminders can also be placed in rooms to prompt consumers to consider their responsibility and obligation to protect the environment in lieu of just considering their own interests (Goldstein et al., 2007).

Additionally, governments and enterprises should frequently publicize and highlight that every consumer has the ability and obligation to protect the environment and their environmentally friendly behavior does have a significant effect on solving environmental problems. Governments can focus on in-school education and public communication campaigns to improve perceived customer effectiveness and environmental concern. Considering the salient effects of perceived customer effectiveness, green hotels and

governments should launch several environmental protection public lectures. Brochures about environmentally friendly attributes of green hotels could be distributed to consumers freely.

To recapitulate, governments and enterprises need to join hands to make the consumers realize the seriousness of environmental protection, foster consumers' environmental awareness and form a favorable attitude toward green hotels. Thus, the stated measures will enrich and improve the people's perceived effectiveness and make them realize that they have the ability, responsibility, and obligation in their daily lives to protect the environment.

## **5.4 Limitations and perspective for future research**

### **5.4.1 Limitations**

This study accomplished the research objectives, but there are some limitations. The first limitation of this research is that the relationship between the independent variable and the dependent variable has an R-square adjusted of 0.763. Thus, the independent variables explain 76.3% of the variation of the dependent variable. Out-of-model variables and random error explain the remaining 23.7%.

The second limitation of this research is the number of 306 valid answers in this study. This can be one of the reasons that make environmental concern and perceived customer effectiveness variables have no impact on intention to stay, which is contrary to previous studies as mentioned above (Kim and Choi, 2005; Yan and Chai., 2021; Demir et al. al., 2021; Wang et al., 2018). Furthermore, as the sample size is increased, we will have more opportunities to explore the broader issues of intention to stay at green hotel such as control and moderator variables. Besides, our experimental results do not have an even distribution among the participants, specifically, Northerners accounted for the lion's share of 78%. On the other hand, the number of people in the South and the Central region is insignificant compared to that of the North, about 14% and 8% respectively. Not stopping there, although Huddy (2001), Kim and Choi (2005) mentioned that differences in culture, environmental awareness as well as income are the causes limiting the intention to stay at green hotels, experimental results with the total valid responses, we have not yet confirmed the root cause for this difference. In addition, this thesis has not yet examined the role of control variables such as age, gender, occupation, and income in directly affecting customers' different service behavior, especially intention to stay at the green hotel.

#### **5.4.2 Perspective for future research**

By uncovering the abovementioned limitations, we help our readers better grasp our field of expertise so they can use it in their future research or other related activities. Firstly, the research concentrates on some specific variables, theories, and precise definitions. To obtain detailed and accurate results, the survey should be conducted over a long period and add many independent variables to explain more about the dependent variable such as subjective/social norms, and willingness to pay. Secondly, further research should also take into expanding the scope of the study with a larger sample set with a longer of time and various data collection methods to be able to demonstrate the impact of the demographic toward intention to stay in a green hotel. Thirdly, the influence of control variables on intention to stay at green hotel should also not be ignored in future studies. Last but not least, researchers in the future should identify or use new metrics applications to calculate more precise outcomes and contrast them with our results. From there, based on the current market situation, specific proposals, high applicability, and direct experience, these problems and errors would be pointed out and fixed in more detail.

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# APPENDIX

## SURVEY TOPIC: INTENTION TO STAY AT THE GREEN HOTEL IN VIETNAM

### GENERAL INFORMATION

Please tick  on your chosen option. All personal information you provide is confidential and only used for research purposes.

1. How often do you stay at a Green Hotel in Vietnam?

- More than once a month
- Once a month
- Once every few months
- Twice a year
- Once a year
- Once every few years

2. Gender

- Male
- Female
- Don't want to mention

3. Reside

- Northern Vietnam
- Central Vietnam
- Southern Vietnam
- I don't live in Vietnam at the moment

4. Job

- Executive, manager
- Expert in specific field (Health, Education, Business, etc.)
- Technician and apprentice
- Administrative staff

- Service and sales staff
- Skilled farmers in agriculture, forestry and fishery
- Craft and related trades workers
- Mechanic
- General labor/ Unskilled labor
- Armed forces occupations
- Retired
- Unemployed/ Job seeker/ Student/ Have no income

5. Income

- Under 5 million VND
- From 5 to 10 million VND
- From 10 to 20 million VND
- From 20 to 50 million VND
- Over 50 million VND

6. Age

- Under 18
- From 18 – 25
- From 25 – 35
- From 35 – 45
- From 45 – 55
- From 55 – 65
- Over 65

7. National

- Vietnamese
- Others

8. Have you ever stayed at a green hotel in Vietnam?

- Yes
- No

## ASSESSMENT QUESTION

Please indicate your level of agreement or disagreement with the following statements about the service performance of logistics service providers that you have cooperated:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

(\*): Required question

No.	Encode	Description	Degree				
			1	2	3	4	5
Environmental concern *							
1	EC1	I am extremely worried about the state of the world's environment and what it will mean for my future					
2	EC2	Mankind is severely abusing the environment					
3	EC3	When humans interfere with nature it often produces disastrous consequences					
4	EC4	The balance of nature is very delicate and easily upset					
Green hotel knowledge *							
1	GHK1	Compared to the average person, I am familiar with hotels' environmental policies					
2	GHK2	Compared to my friends, I am familiar with hotels' green programs.					
3	GHK3	Compared to people who travel a lot, I am familiar with hotels' green labels.					

Green trust *					
1	GT1	I feel that green hotel's environmental comments are generally reliable			
2	GT2	I feel that green hotel's performance is generally dependable			
3	GT3	I feel that green hotel's performance is generally dependable			
4	GT4	The green hotels generally keep promises and commitments for environmental protection			
5	GT5	The green hotels generally keep promises and commitments for environmental protection			
Perceived customer effectiveness *					
1	PCE1	Staying at a green hotel, everyone's behavior will positively affect society			
2	PCE2	I think staying in a green hotel can help save energy			
3	PCE3	I think staying in a green hotel helps protect the environment			
4	PCE4	I can't do anything about protecting environment			
Customer attitude *					
1	CA1	For me, staying at a green hotel when traveling is good			
2	CA2	For me, staying at a green hotel when traveling is desirable			
3	CA3	For me, staying at a green hotel when traveling is pleasant			

4	CA4	For me, staying at a green hotel when traveling is wise					
5	CA5	For me, staying at a green hotel when traveling is favorable					
6	CA6	For me, staying at a green hotel when traveling is enjoyable					
7	CA7	For me, staying at a green hotel when traveling is positive					
Intention to stay at green hotel *							
1	INTS1	I am willing to stay at a green hotel when traveling					
2	INTS2	I plan to stay at a green hotel when traveling					
3	INTS3	I will make an effort to stay at a green hotel when traveling					